



S. H. W. Williams
GEOGRAPHICAL DESCRIPTION

OF THE *Whaling* *1828*

STATE OF LOUISIANA:

PRESENTING

A VIEW OF THE SOIL, CLIMATE, ANIMAL, VEGETABLE, AND MINERAL PRODUCTIONS; ILLUSTRATIVE OF ITS NATURAL PHYSIOGNOMY, ITS GEOGRAPHICAL CONFIGURATION, AND RELATIVE SITUATION: WITH AN ACCOUNT OF THE CHARACTER AND MANNERS OF THE INHABITANTS.

BEING AN ACCOMPANIMENT TO

THE MAP OF LOUISIANA.

— — —
BY WILLIAM DARBY.
— — —

Je répéterai encore ce que j'ai déjà dit plusieurs fois, que la Louisiane est sans contredit le plus beau pays de l'univers par la douceur de son climat et son heureuse situation.

L'on y peut cultiver avec succès toutes les plantes de l'Europe, sans distinction, et presque toutes celles de l'Amérique.

Memoir de M. De Vergennes sur la Louisiane.

PRINTED FOR THE AUTHOR,

AND

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1816.

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DISTRICT OF PENNSYLVANIA, TO WIT :

* BE IT REMEMBERED, That on the eighth day
* *SEAL.* * of April, in the Fortieth year of the Independence
* * of the United States of America, A. D. 1816,

WILLIAM DARBY, of the said district, hath deposited in this
office the Title of a Book, the right whereof he claims as Author,
in the words following, to wit :

“Geographical Tracts on the State of Louisiana, presenting
the character and manners of the inhabitants; the variety of
its soil, climate, animal, vegetable, and mineral productions,
with a Map illustrative of its Natural Physiognomy, its
Geographical configuration, and relative situation, by William
Darby.

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Memoir de M. Vergennes Sur La Louisiane.”

In conformity to the Act of the Congress of the United States,
intituled, “An Act for the encouragement of Learning, by se-
curing the Copies of Maps, Charts, and Books, to the Authors
and Proprietors of such Copies, during the times therein men-
tioned.”—And also to the Act, entitled, “An Act supplementary
to an Act, entitled, “An act for the encouragement of Learning,
by securing the Copies of Maps, Charts, and Books, to the Au-
thors and Proprietors of such Copies, during the times therein
mentioned,” and extending the benefits thereof to the arts of
designing, engraving, and etching historical and other prints.”

D. CALDWELL, *Clerk of the District
of Pennsylvania.*

PREFACE.

THE following work has now been several years in progress; events both of a public and private nature have alternately accelerated and retarded its advance.

Its introduction to the public, however, could not have happened at a moment more auspicious than the present, or when correct information respecting Louisiana could have been more interesting.

The author has resided in the region embraced by his work, during the time that has elapsed since its incorporation into the United States' government. The various events and revolutions that have developed the character of the people, and demonstrated the value of Louisiana as an acquisition to the United States, have passed in review before him.

Having eagerly sought and patiently examined all kind of information in any respect relating to the political, moral, or natural history of Louisiana, but little aid has been received from foreign sources. Few works have been written on the subject that contain extensive information, and the number still more rare whose delineations are accurate.

Many works have been written upon Louisiana, containing but little matter that can either instruct or amuse. One, however, possesses both those requisites in an eminent degree. Mr. Breckenridge wrote from personal observation, unshackled by preconceived opinions in religion, politics, national distinctions, or physics :.... This enlightened young man described men as he found them, represented objects without distortion; and as far as his descriptions extend may be considered correct, chaste, and natural. If Mr. Breckenridge had accompanied his work with a map correctly drawn from actual admeasurement and observation, he would have left but little for his successors to execute, in giving to the literary world a clear, comprehensive, and finished picture of Louisiana.

Lafon's Map, published in 1805, considering the then state of geographical knowledge respecting Louisiana, possesses much real merit.

Major Stodart's work is valuable as a collection of facts; but it is too voluminous for extensive utility.

The utmost confidence can be placed on the accuracy of the information given by general Pike, as far as his personal observation extended.

But little knowledge of Louisiana can be gained from the perusal of works published in Europe. From national prejudice and want of accurate material, Transatlantic writers, when treating on any part of America,

almost uniformly mislead rather than instruct. From the former censure Count Vergennes must be excepted; this enlightened and liberal statesman in his memorial presented to the French government, in the early part of the American revolution, does ample justice to the American character; but in local knowledge, though more correct than most European authors on that subject, yet evinces a very limited knowledge of the positions, and relative importance of places.

Most persons who have visited the banks of the Mississippi, had objects very different from an inquiry into the geography of the country, or the moral situation of the inhabitants.

Extensive as is the range of his work, the author has visited the most important parts; he has examined the rivers, soil, and productions; carefully noted the manners of the inhabitants, in his excursions through the valley of the Mississippi; and, in a residence of sixteen years, has felt all the changes of the climate; has beheld the separation of a people from a despotic government; their incorporation into a government of law and reason; and has seen demonstrated how deserving those people are of all the benefits resulting from rational legislation.

The fruits of his labour he now presents to the public, without attempting apology, or invoking indulgence: the work, like all others, must rest on its in-

trinsic merit and usefulness, and can gain nothing by the most powerful personal recommendation.

History present rather the accidents that vary the existence, than the progress of man in knowledge, industry, and happiness.

Revolutions that shake to ruin ancient, or create new empires, are beheld with attention. The narration which recounts the storm of battle is read with avidity : but the slow, silent, and steady progress of nations, from their infancy to power and civilization, passes unheeded.

No subject can be more interesting than the juvenile struggles of a rising colony : its history is the recital of the gradations from weakness, ignorance, and want, to power, science, and abundance. No instance has yet occurred of a colony experiencing such singular vicissitudes of fortune, and whose change of sovereigns has been so frequent, in an equal period, as Louisiana. The germ of the population was Frenchmen of the reign of Louis the XIV. ; consequently many individuals, eminent for their talents, virtues, and scientific acquirements, composed part of the original establishment, and whose genius contributed to give many features in character to the people, which their posterity now preserve.

Presenting what, from experience, he has found characteristic of both the people and climate, the author is aware of the prejudices he has to combat, the misre-

presentations he has to contradict, and the difficulties he must have to encounter, in the attempt to introduce more liberal opinions respecting an important section of our domain, and of a respectable body of his fellow citizens.

In an enquiry into the influence of the climate upon the health of its inhabitants, he has passed by a natural transition, to its effects upon the mental and moral faculties of those born within the sphere of its influence.

This section he has performed with feelings of pleasure; and the people of the United States will receive with satisfaction a detail that, when admitted as correct, must lessen the prejudices that accident and design have engendered, to widen the distance between them and their fellow citizens in Louisiana.

He has felt it a duty as a man, and claims the privilege as an author, to tear away the veil that ignorance or prejudice has placed between men, united not only by the mutual weaknesses and wants of their nature, but by the bonds of political assimilation.

Like all other European colonies in America, Louisiana was composed from all the various elements that formed the parent stock: adventurers from all ranks of society, many indigent, and some criminal individuals, entered into the mixture from which arose the present population.

Removed to distances the most remote from their native place, men may for a time retain many of their established customs; but local position so powerfully influence human action, that habits are acquired which give a distinct feature to society in all places. Something more than a century has elapsed since the colony began to be peopled from Europe; many opinions, the offspring of national or family pride, have been discarded, and replaced by others, better suited to the new position in which the posterity of the first settlers are placed.

As the valley of the Mississippi will be for ages the receptacle of emigrants from the eastern slope of that chain of mountains which divide our territories, a development of its resources, so favourable to agriculture and commerce, must claim no little part of our attention.

The comparative extent of surface will, at this time, if carefully examined, enable the least discerning to trace the future migrations of wealth and power, and determine, as far as human foresight can penetrate, the destiny of the United States.

Without pursuing any very systematic arrangement, are described the varied features of nature, the animal, vegetable, and mineral productions, as each object presented itself in succession: the author has endeavoured to form a faithful, if a rude, draft of an extent of the earth hitherto little known.

In the execution of his task there is but one part on which he dares to boast. He has invariably pursued, as far as his judgment and means permitted, a scrupulous adherence to truth ; in narration and description, he has presented to the extent of his power, things as they really are.

A period of near eleven years has now elapsed since this work was first undertaken. Most of that time employed in the collection of materials. The moment of its introduction to the public has now arrived ; and stands with all its errors, defects, and excellencies, (if it possesses any,) exposed to censure, or entitled to applause.

GEOGRAPHICAL TRACTS

ON

LOUISIANA.

.....

INTRODUCTION.

Extent, limits, natural and political divisions, climate, general divisions of soil and vegetable productions.

LOUISIANA is bounded south by the gulph of Mexico, east by the Mississippi and Perdido rivers, north by an imaginary line, nearly coinciding with the northernmost part of the 48th degree of north latitude, from the head waters of the Mississippi to the Pacific ocean; west by the Pacific ocean, and south-west by the Spanish internal provinces.* This great expanse has a frontier with the Spanish internal provinces of 1900 miles; a line of sea-coast on the Pacific ocean of 500 miles; a frontier with the British dominions of 1700 miles; thence following the Mississippi by comparative course 1400 miles; and along the gulph of Mexico 700

* Where La Salle landed in 1683, ought to be by American writers assumed as the west limit of Louisiana on the gulph of Mexico.

miles : from the mouth of Perdido to the 31° N. lat. 40, along the latter parallel 240 miles : having an outline of 6480, or 6500 miles, in round numbers, and 1,352,860 square miles of surface.

Louisiana is now divided into three grand divisions. The state of Louisiana, bounded by the gulph of Mexico south, by the Sabine river, and a meridian line from 32° to 33° N. lat. on the west, by the territory of Missouri north, and divided from the Mississippi territory by the Mississippi river, between the 31° and 35° of N. lat. and by the parallel of 31° N. lat. between the Mississippi and Pearl rivers. The state of Louisiana contains 45,860 square miles of area, and is watered by the Mississippi, Red, Ouachita, Atchafalaya, and Pearl rivers, together with numerous other rivers of lesser note.

After the erection of Lower Louisiana into a state government, Upper Louisiana received the name of "The Territory of Missouri." This latter section is bounded east by the Mississippi river, south by the 33° N. lat. and the province of Texas, and south-west by the Spanish internal provinces, west by the Pacific ocean, and north by the British dominions. The territory of Missouri contains an area of 1,200,000 square miles.

That part of Louisiana, known by the name of the Province of Texas, which is claimed by Spain as part of the internal provinces, and included in the vast intendancy of San Louis Potosi, is bounded east by the

state of Louisiana, south by the gulph of Mexico, west by an imaginary limit, and north by Red River, containing an area exceeding 100,000 square miles.

Beside the above three grand divisions of Louisiana, there is a small section, trivial in extent, of 7000 square miles, bounded west by Pearl, east by Perdido river, north by the 31° of N. lat. and south by the gulph of Mexico. This latter section now forms part of the Mississippi territory.

Louisiana occupies the central part of the Columbian valley, the western slope of the valley of the Mississippi, and the inclined plane, over whose surface flow the small rivers that disembogue themselves into the gulph of Mexico, east of the Mississippi as far as the Perdido, and west of the Mississippi to the Guadeloupe.

The Missouri mountains, dividing the waters of the Mississippi from those of Columbia, forms the principal chain in Louisiana; collateral ridges extend themselves from the parent chain, which in the valley of the Mississippi wind to the S. E. generally, and give that direction to all the rivers that enter either the Missouri, Mississippi, or Mexican gulph. The courses of the Missouri and Mississippi, are in a great measure conformable to this system. In the wide slope from the Rio grande del Norte to the Missouri, nature has been more uniform than on any equal extent on this globe; the courses of all the rivers accommodate themselves to each other with a regularity

that would seem the result of artificial arrangement; the spurs of the Caous,* though of little elevation, are regular, gradually sinking, until lost in the margin of the alluvial region of the Mississippi and gulph of Mexico. West of the main chain, other ridges run parallel, leaving long narrow vales between them: thus this great range of mountains, throwing out ramifications on each side, which, with various inclinations, to the parent spine, form the most prominent features in the physiognomy of Louisiana. It is very difficult to establish any systematic classification of the different features of Louisiana; the general division into alluvial and prairie, admits of so many exceptions, as to render its adoption rather the source of error than of determinate elucidation. Mountains being in all countries the most prominent and durable features in nature, and less capricious in their arrangement, afford the most accurate outline; mountains, when carefully examined, have been found to conform to each other with singular exactness, the main chains protruding their lateral embranchments like the spine and ribs of an animal.

Following the natural division, we find Louisiana separated into two unequal portions, by the great chain of mountains that give source to the Missouri and Columbia rivers. †

* Caous is the name given by the Spanish colonists, to the mountains, from which flow the Rio Grande, Red, and Arkansa rivers eastward, and the Colorado of the gulph of California, and most probably the Multnomah to the westward.

† This chain, though a prolongation of that of Anahuac, ought to receive some distinctive term to designate the principal spine in Louisiana

The ridges that intervene between the various streams on the east side of this chain, are branches running generally south-east, having a gradual depression towards the Mississippi.

On viewing a general map of North America, will instantly be seen an inclined plane, extending from the Mexican gulph to the head waters of the Missouri and Saskashawin rivers: this great slope, composes that division of Louisiana that may with accuracy be called south-eastern. The rivers south-west of Red river, having the same inclination, evidently owe their origin and course to similar causes with the Red, Arkansa, and other rivers that enter the Mississippi and Missouri from the north-west, and may, without violence, be included in the same system.

The division into prairie and alluvion, though justly rejected when treating of all Louisiana, may be adopted with strict propriety when applied to the south-east section. Lands formed by alluvion are inferior in extent to prairie, but much more valuable, and are confined to narrow borders along the margin of rivers. Naked themselves of timber, and having but scanty herbage, the Missouri mountains protrude immense

Snowy, rocky, sandy, and other attributes common to all mountains of any considerable elevation, ought to be rejected as improper terms, when used as descriptive appellations. Without having the presumption to attempt the introduction of a name in geography, we will, to express our meaning without circumlocution, give this chain the name of the Missouri mountains, from the principal river they produce. Adopting this method of discrimination, by a general term, much confusion will be avoided.

tracts entirely devoid of wood. Those natural meadows are broken by strips of timber land, skirting the streams, but more than four-fifths of the entire surface is prairie, giving a distinct character to the area between the Mississippi bottoms, and the summit of the Missouri mountains. With more fertility, those plains have a striking resemblance to the desert Steppes of Asia,* north of the Caspian, and Aral seas. The northern parts, watered by the Missouri, are more productive than the southern, lying contiguous to the gulph of Mexico; but every where seem to repulse agricultural, and invite to pastoral life.

This tract is now the residence of innumerable herds of buffaloe, deer, and two or three species of those mixed animals who seem to occupy the space between deer and sheep.† Though but imperfectly known, two very distinct species are ascertained, one with long curvated horns like the common goat, another with spiral horns resembling the domestic ram. They range over the wide extent from the Arkansa to the Pacific, and from the Red river to the sources of the Missouri; wherever they are found, nature has been singularly

* The great similarity of the North American continent to Asia and Europe, and its difference from Africa, is in nothing more striking than in the productions of common salt, (Muriate of Soda,) which abounds in all the extent from Ouachita in the state of Louisiana, to the Pacific ocean. (The interior of Africa seems singularly void of salt.) *Mungo Park, Horneman, Brown, Bruce.*

† From the carelessness and predilection of European writers and travellers, almost all animals indigenous to America, have received names from the nomenclature of the eastern continent, whilst in fact scarce any animals of the old continent have characters in common with those of the new.

avaricious of water. "At the foot of the mountains of California, the traveller finds only sand, or a rocky bed covered with cactus cylindricus, (a species of prickly pear,) at a very great elevation. Very few springs of water are found, and by a great fatality it is remarked, that where fresh water is found the rocks are naked, whilst there is but little water where the rock is covered with vegetable earth."*

This frightful picture designates the whole region, from the limits of the state of Louisiana to the Rio Gila, and to the eastern slope of the Californian mountains, skirting within a short distance of the shores of the Pacific ocean: some fertile well watered tracts exist, but they are bright spots upon an extended and arid waste.

How far man is influenced in his moral habits by his physical situation, receives a new demonstration from the manners of the wandering tribes that range over the foregoing expanse. Following the herds of buffalo who change their pasture with the seasons, the Hietans similar to the Nomadic tribes of Tartars and Arabs have no settled residence. Encamped where they find water and their prey, they remain until dearth exhausts water and dries up the herbage, drives the buffalo to another haunt. With the exception of their not having domesticated the ruminant animals upon whose flesh they exist, those savages lead a life of great similarity to that of the primitive pastoral nations of the old continent.

* Humboldt's *Essay on New Spain*.

The Hietans have domesticated the horse, and now equal the most civilized people in their management, agility in mounting, and applying the force and strength of that noble animal, either in chace or war.

They are, as far as correct information has been received, the only people, aborigines of this continent who have been gallant enough to attempt, and sufficiently skilful to withstand, the shock of cavalry instructed on the principles of European tactics.*

Free as the plains over which they rove are expansive, those tribes possess the extent of an empire; an extent which from many causes, seem doomed never to contain a numerous civilized population upon its surface. Should great cities ever exist upon this tract, they must, like Palmyra, draw their grandeur from commercial revolution, and by other changes in human affairs sink to ruin.

One characteristic of the North American desert, however, countervails many of its asperities....the extreme purity of the atmosphere. Perhaps no part of the earth can be more favourable to human existence as far as the air is concerned in the preservation of animal life. Open to every wind that blows, this great grassy expanse is purged from impurity, and gives a force and vigor, both bodily and mental, to the natives that repay them in a great measure for their other deprivations.†

* General Pike.

† It would seem from a review of human history, that the more jealous any nation may be of its individual freedom, the more prone to enslave

“The Mexican troops of the *Présidios*, are exposed to continual fatigues. The soldiers that compose them are all natives of the northern part of Mexico. They are mountaineers, of high forms, extremely robust, accustomed to the frosts of winter, and to the ardour of the sun in summer. Constantly under arms, they pass their lives on horseback. They often march eight or ten days over those desert steppes, without carrying with them other food, except the flour of Indian corn, which they mix with water, as they meet a spring or pond on their road. Well informed officers assert, that it would be difficult to find in Europe a troop more light and active in their movements, or more impetuous in their charge.”*

Nature has every where solaced man by some striking benefaction for the hardships of his existence. Health is the first and best of her gifts. With this heavenly treasure even poverty becomes innocuous, though so frightful where disease sharpens its horrors.

others. This dominant principle is carried by savages to the utmost extent in their power. The Hietans have reduced their women to the most abject and degrading slavery. The hardships imposed by those warlike hunters upon the softer sex, are severe and irremovable. The distance of rank and consideration between an American slave holder in our southern states, and his slaves, are not greater than between an Hietan and his wife. Every degrading office that is performed in our southern states by the black, fall with equal contumely amongst the Hietans, to the lot of the wretched female. In savage nations woman is a slave; in barbourous nations a prisoner. It is only in the civilized state of human society, that as a mother she is our nurse, our early friend and preceptress, and as a sister or wife, an endearing companion.

* Humboldt's Political Essay on New Spain, Paris edition, vol. V. page 57.

Health and liberty exalt and ennoble man; without them he is the most dejected and abject being that inhabits this globe. Bounding over the plains of Red River, Rio del Norte, or Colorado, inhaling the invigorating salubrity of the air in which he lives, breathing the rich aroma of his native plants, the man of the interior regions of this continent, enjoys what nature gives him, without avarice or ambition, subject to all the rigors and vicissitudes of savage life, he is exempt from pains and penalties imposed by artificial wants.

Turning our eye towards the Mississippi, another region presents itself. Every object now changes its appearance. The mountain gradually sinks into plains, the dry and arid prairie is superseded by the deep recesses of the annually overflown banks of the great monarch of North American rivers, and his numerous tributaries. Vegetation now assumes a more vigorous form. The trees of the forest more gigantic in their strength, and presenting to the eye an entirely different aspect. For the spiral pine is substituted the umbellated cypress. The soil is more fertile, the face of nature less monotonous. Other animated beings present themselves. At every step, the traveller is reminded that he has passed one of those physical limits that separate the great families of organized existence. Changing seasons here produce different phœnomena. Spring, that at the source of Red river clothes the earth in green, at its mouth covers it with a flood of water. Even the birds that skim the air are different, for the falcon is exchanged the grey eagle, and for the hawk the millions

of migratory water fowl, that perform their annual voyage between the Canadian lakes, and the shores of the Mexican gulph.

To convey precise ideas respecting the region more particularly represented by the map, we will take a cursory survey of the whole extent. Setting out from the west, and reviewing the rivers, and their borders, as they follow in succession, to the east, will enable the reader to form clear conceptions of the general features of the country.

The Sabine river has obtained more attention from becoming the temporary boundary between the United States and the Spanish internal provinces, and part of the permanent western limit of the state of Louisiana, than it would be entitled to claim, from the magnitude of its column, or the fertility of its shores. This river discharges itself into the gulph of Mexico, in $29^{\circ} 23'$ N. lat. and in $93^{\circ} 57'$ west from Greenwich, $16^{\circ} 57'$ W, from Washington city. The depth of water at the mouth of Sabine, is not more than four feet on the bar, at ordinary tides. The mouth of the river is wider than could be expected from the quantity of water it discharges into the gulph of Mexico.

No prospect can be more awfully solitary, than that from the mouth of the Sabine. A few trunks of trees thrown on shore by the surf of the sea, and scattered clumps of myrtle, are the only objects that arrest the eye, from the boundless expanse of the gulph, and the equally unlimited waste of prairie. No habitation of

man presents itself on the disc of the horizon, to cheer the voyager with the distant view of the residence of his fellow men. No herds grazing on the green plain, recall his domestic sensations. The deep solemn break of the surge, the scream of the sea fowl, the wind sighing mournfully through the myrtle, and a lone deer bounding along the shore, are the only objects that vary the monotony of the scene; the only sounds that interrupt the otherwise eternal silence of this remote region. In the language of an elegant and interesting writer, it is one of those “unbounded prospects, where “the imagination, is not less oppressed than surprised “by the greatness of the spectacle. The mind distressed, seeks on every side in vain for an object on “which to repose, finds only a solitude that saddens, “an immensity that confounds.”*

Ascending the Sabine, about twelve miles from its mouth, the river expands into a wide shallow lake, of ten or twelve miles wide and twenty-five long, with a bearing N. E. and S. W. At the northern extremity of this lake, enters both the Sabine and Nétchez. At their junction with the lake, those two rivers are nearly of the same width, about 300 yards. A line of sea-shell banks are found along the shore of the lake, between the Sabine and Nétchez. On the point on the left shore of the Sabine, an immense mound of those shells are found, covered with dwarf trees. This latter bank is an excellent land-mark in coming up the lake, to point out the real entrance into the Sabine. Except a few scattered trees on the margin of the lake,

* Abbe Berthelemy.

the prospect continues to present an expanse of marsh prairie, not more than three feet above common high water. Ascending fifteen or twenty miles above the lake, wood commences to present itself in larger bodies, the land rises by a slow gradation. The first timber found is pine, along a creek coming in from the N. W. entering Sabine at $30^{\circ} 03'$ N. lat. A very wide range of high prairie winds to the N. W. from the mouth of the above creek, and terminates on this side the prairies on Sabine. The woods now enclose the river on both banks. The stream becomes contracted to 150 yards wide, which dimensions it preserves, with not much variation, as high as the Alabama villages, where it shrinks to not more than 70 or 80 yards in breadth, and continues to present nearly the same size as high as 32° of N. lat. A few miles below the Indian villages, the Sabine is encumbered with a raft of timber of a mile and an half in length. When the waters are high, an outlet from the right bank, leaving the river at the higher extremity of the raft, conducts into a small creek that enters the river below. Only canoes can at any time pass this outlet, its channel is too small and shallow for large boats,

Fifteen or sixteen miles below the raft, comes in from the west the Wau-ca-hatcha, or Cow Tail river, the last stream of any consequence that enters Sabine from either bank. Ledges of rocks and hills of considerable elevation now present themselves frequently along the right bank. Those hills rest on a basis of blue friable sandstone, arranged in very regular strata;

their apex and slopes are generally clothed with pine, beech, various species of oak, ash and hickory; dogwood abound, and dwarf cane often mingles itself amongst the most gigantic vegetables. The soil is thin, and almost universally of a yellow ochreous tinge. The left or east bank is uniformly lower than the right or western, the high land but seldom reaching the river....The great range of pine forest, that occupies the space from the prairies of Opelousas to Red river, wind along the Sabine. The general surface of this region rises by very gradual elevation from the prairies into hills of considerable height.... The principal range of those hills pursue nearly the same course with the Sabine; twenty or twenty-five miles distant, divide the waters that flow into Red river and the Calcasu, from those that flow into Sabine. The creeks that are formed from the western slope of those hills, lose themselves in the latter river before coming to any considerable size, whilst those flowing from the eastern declivity below $31^{\circ} 30' N.$ lat. quickly intermingle and form the Calcasu river.

North of $31^{\circ} 30'$, this ridge of hills occupies nearly a medium distance from Red and Sabine rivers, become extremely broken; which general position and feature are their characteristic, until beyond the state of Louisiana. Some spots of good productive soil is found on the creeks that enter the Sabine on the east, but not of great extent. Pine and oak compose the prevailing timber....The surface of the earth is clothed in spring and summer with an abundant herbage, that render the country excellent for pasturage.

Though many springs are found within the region above noticed, they by no means abound. In general, the creeks are produced by the rains that in winter fall in such abundance in Louisiana. In summer and autumn those creeks cease to flow, and in many places, a want of water is not the least impediment that nature has placed in opposition to the encrease of population on this tract. Many of the creeks that flow into the Calcasu, some of those that enter Red river, particularly those in the settlement of Bayou Pierre, many creeks of the Sabine are, however, fine streams of excellent ever running water.

A singular fact, in the natural history of all the state of Louisiana, respecting water, may not improperly be introduced in this place. You find spots where the most pure limpid water flows in abundance, and in advancing a few miles, without perceiving the least change in the general configuration of the earth's surface, springs are no more found, and the vallies become the mere drains of the hills in time of rain.

After being known to civilized man upwards of a century, the sources of the Sabine remain yet unascertained with any certainty. The Panis or Towiache Indians have their village on Red river, at 97° W. lon. and $33^{\circ} 20'$ N. lat. The 32° N. lat. intersects the Sabine at $94^{\circ} 05'$ W. longitude, distant from the Panis village upwards of one hundred and eighty miles in a direct line. A ridge of hills winds along the south bank of Red river, near the Panis village, discharging the water southwards, towards the gulph of Mexico.

The streams near the village are supposed by some to be the sources of Sabine, but from the diminutive column of that river, where it passes 32° N. lat. it is extremely improbable it can draw its sources from so great a distance.

The general range of the rivers would indicate the neighbourhood of the Panis as the sources of the Trinity, which is not even so well explored as its neighbour the Sabine. Data being wanting for the precise place from which those two rivers have their sources, they are drawn upon Mr. Melish's general map, agreeable to analogy, with their size and course in places where they are known with precision.

Little more need be expressed respecting the physiognomy of the country, the vegetable productions, or soil of the Sabine, so much monotony prevails in the objects of nature, animal and vegetable, that the description of one place is the model of all others in this region.

No settlements of any civilized people have yet been made on Sabine; if we except a family residing at the crossing of the road to Natchitoches, from Texas. Some recent establishments have been made at a distance from the river, on some of the creeks of the east side, by Americans, and by Spanish refugees from St. Antonio and Nacogdoches, in the late revolution in the internal provinces. The country bordering on this river may be yet considered a wilderness, particularly the western slope.

The Nétchez, or Western branch of Sabine, is formed from the united streams of the Angeline, Attoyéaqué, Nana, and the Attascocito. These streams drain the semi-ellipse formed by the Sabine. Occupying a wider surface, the Nétchez, though more humble in length, equals, if it does not exceed the Sabine, as it respects quantity of water. Nacogdoches, at N. lat. $31^{\circ} 27'$ W. long. $94^{\circ} 17'$ stands on the Arroyo de la Nana, in a beautiful, healthy, well watered country. The presidio of Nacogdoches, formerly Assinaye, was formed by the Spaniards under Don Martin Dalarconne, in 1716.* This small town, and a few farms in the vicinity, is yet the only improvement made by the Spanish emigrants after the revolution of ninety-eight years. The small tribe of Indians called Nadacos, reside about thirty miles north of Nacogdoches, upon the head waters of the Angeline; where they were found near a century past by the French and Spaniards. The Nadacos are a poor inoffensive race, in peace with all their neighbours, both white and black.

The lands watered by the Nétchez and its tributaries, are of superior quality to the country on Sabine, but deserves, nevertheless, the character of sterility, when compared with the margin of many rivers in Louisiana. The prevailing timber is oak; pine becomes more rare west than east of Sabine; great extent is occupied by the jack oak barrens, so often found in North America.

* La Harpe.

In advancing towards the sources of the Nétchez and Sabine, the country insensibly becomes prairie, of a harsh dry soil, broken surface, herbage of a dwindled appearance. In spring and summer those plains are covered with herds of deer, buffaloe, and the non-descript animal called the ibex or mountain goat by some, by others, the mouflon or wild sheep of Europe and Asia, by others the gazelle, and by others the antelope.*

The next great feature in the geography of Louisiana, advancing either eastward or northward from the Sabine, is Red river.

The general preconceived idea that Red river receives but few accessory branches, is extremely false. The valley of Red river is indeed confined, when compared to many others of much more humble length. From the low sandy hills, or Caous mountains, near Sta Fé, where Red river commences, two other streams, not considerably inferior, have their source. The Blue river and False Ouachitta, after winding several hundred miles in the same direction, join Red river, between 98 and 99° of W. long. The united streams continue some distance S. E. then turn to the eastward, and after winding in that direction a short distance, assume a course considerably north of east, and receive some few small streams, and before entering the state of Louisiana, turn to the S. E. Many rivers of from eighty to one hundred and fifty miles in

* See note to page 16.

length that enter into and augment the column of Red river, have hitherto remained entirely unknown. Between the Panis village and the limits of the state of Louisiana, Red river receives from the north the rivers Kimichie, Vaseux, and Little river of the north; from the south, the Bois D'Arc and Little river of the south. The Bodcau, Dacheet, Black Lake and Saline rivers, entering Red river within the state of Louisiana, have remained until this time, unknown to geographers.

The river that flows into the lakes of Red river near the Cado villages, and another of equal magnitude that enters some distance above, now for the first time have been noticed in any descriptive work. Those rivers though small in themselves, have great influence on the rise and fall of waters in Red river. Some very valuable tracts of land are found on their branches. The Dacheet particularly contains the most extensive range of rich soil to be found in the N. W. angle of the state of Louisiana. Upon the Saline is a very valuable salt flat, from which a considerable quantity of excellent salt is now made, and would admit the production of any quantity that an extensive population could demand. The works now in operation stand nearly upon the 32° N. lat. and on $92^{\circ} 52'$ W. long. about twenty-five miles from the town of Natchitoches, following the road. The Saline river which takes its name from this salt flat, is a fine clear limpid stream of fresh water, rising about fifty miles north of the salt works; it admits of navigation with large boats to the latter place, expands a short distance be-

low into a lake of ten or twelve miles in length, and half a mile wide, again contracting into a small column unites with the Black Lake river; their united waters join the Rigolet de Bon Dieu, eight miles N. E. of Natchitoches.

The lands on the Saline are generally sterile. Pine is the principal timber, interspersed with oak of different species. Near the water courses ash and sweet gum are found in abundance.

The Black Lake river rises in the same ridge of hills with the Saline, and it is here that the state of Louisiana commences to rise into elevations of any considerable note. The features of a mountainous country now present themselves, ledges of a loose sand stone rock abound, nodules of iron ore are every where met with, and petrifications of the most diversified forms are strewd over every slope. Those petrifications have generally the appearance of having first undergone their change from ligneous to the siliceous state in which they are found, and having been imbosomed in an argillaceous clay, which indurating, enclosed them in its mass.

Along the range of hills between Black Lake river and Lake Bistineau, these petrifications are found in great abundance. Lake Bistineau presents to the traveller a singular picture of recent change on the face of nature. The map will exhibit the position of this lake, its communication with Red river, and its relative extent: but no representation upon a map

can convey an adequate idea of its peculiar physiognomy.

The land along both banks of the lake Bistineau rise into hills from one to two hundred feet of elevation, clothed with pine, oak, and various other trees, often affording most delightful prospects to the eye. The eastern range is higher, more broken and abrupt than the western, and as has been observed abound with petrifications, which are met with much more rarely on the western bank. Along the margin of the water grows the white thorn, hawthorn, and other dwarf trees, forming an elegant natural border. Many small prairies of eight or ten acres in extent spread themselves over the projecting banks, and diversify this wild uncultivated, but romantic scene.

But what renders this lake an object of peculiar interest is, the proof it affords of the continual change effected in those alluviatic regions by the slow, but never ceasing action of water. The medium depth is from 15 to 20 feet, and at the lowest stage never less than ten or twelve, along the principal body of water; though the remains of cypress trees of all sizes now dead and most of them with tops broken by the winds yet remain standing in the deepest parts of the lake. The quality of resisting the action of the air and water for which the cypress is so remarkable, has been the cause why so many ruins of that tree remain in Bistineau, to attest the ancient situation of the country.

No doubt can exist in the mind, after viewing this lake, but that its bed was once the bottom lands along the banks of the small river Dacheet. By the agency of Red river, a bank of earth and sand has been formed across the lower extremity of this valley, which by confining the waters between the hills at all seasons, formed lake Bistineau.*

No known tree in Louisiana will exist with its roots constantly under water; even cypress perish when submerged throughout the year. This fact is attested in all the low lands of Red Mississippi and Atchafalaya rivers, where the eternal revolutions of the lakes and Bayous frequently expose cypress to stand in water. Their dead trunks are undeniable testimony of their inability to vegetate in this new situation.

In Bistineau the other species of timber that were intermingled with the cypress, decayed rapidly, whilst

* A similar phenomenon, following the opinion of Capt. Clark and Lewis, has taken place in the body of the Columbia river.

“During the whole course of the Columbia, from the rapids to the Chilluckquitpaws, are the trunks of many large pine trees standing erect in the water, which is thirty feet deep at present, and never less than ten. These trees could never have grown in their present state; for many of them are much doated, and none of them vegetate, so that the only reasonable account that can be given of this phenomenon, is, that at some period, which the appearance of the trees induces us to fix within twenty years, the rocks from the hill sides have obstructed the narrow pass at the rapids, and caused the river to spread through the woods.”

Clark and Lewis. Vol. II. p. 241.

the cypress from its durability, withstood the efforts of corruption until the present time.

In the same manner has been formed, the Black lake, Cado lake, Spanish lake, Natchitoches lake, and most of the other lakes that are found near the margin of Red river, from the Quachata village to the rapids at Alexandria. The bed of the river has been slowly elevated by the materials brought down by the current and deposited in the openings of the smaller rivers. The Bistineau from its extent, and the bold features of its scenery, claims a preference in a systematic classification; but in the principles of its formation, its supply, its communication with Red river, its annual revolutions of rise and debasement, its history must be drawn by characters in common with all other lakes in the vicinity.

The principal tributary stream of Red river is Black river, (*Riviere Noir*) or as it is more generally called Ouachitau.* The Indian name having prevailed over that given by the European emigrants. Black river is now used to designate the united waters of Ouachitau, (properly so called), Ocatahoolu and Tensaw rivers; but as Ouachitau has gained a more deserved attention than the other branches, the name of that river can be made use of without impropriety to designate the valley between the Mississippi, Arkansas and Red rivers. The valley of the Ouachitta is

* The French write this name Ouachitta, which, from the orthography of the language, procure the same sound as Washitau.

upwards of three hundred and fifty miles in length, and its broadest part from the Quapa village on Arkansas to the heads of Derbane river, one hundred and fifty wide. This valley is nearly in the form of a semi-ellipse, and averages from seventy to eighty miles wide, extending over more than twenty-five thousand square miles of surface, or upwards of 16,000,000 of American acres, containing extensive tracts of fine arable soil, many places that indicate great mineral wealth, an excellent climate. The region embraced by Ouachitta claim a deep interest from those whose views or researches are drawn towards Louisiana. Few places on the globe contain, upon an equal surface, so many, or more valuable productions, vegetable and mineral; or can present a more diversified surface. All the changes of situation, alluvial deposition, annual inundation, prairie, hills of a thousand forms, and mountains of no mean elevation or extent, successively open their varieties to the eye of the traveller in his transit over the Ouachitta valley.

The principal branch of Ouachitta draws its source from the mountainous prairies between Red and Arkansas, about $95^{\circ} 30'$ W. and 34° N. lat. From this elevated steep arise many other streams, which winding over this broken region, at length unite above the Hot Springs, and form the Ouachitta.

The mountains out of which the Ouachitta flows, are composed of secondary materials; marine exuvia are every where found admixed with the schistus, argil-

laceous earth, and other matters that compose the face and interior of those rugged mountains. No granitic mass is found, the whole face of the country indicates marine submersion at some remote period.

The Fourche au Cado, Little Missouri and Saline branches of Ouachitta, rise in the same ridge with the principal stream.

The lands around the head of Ouachitta partake of the sterility of the great salt plains of Texas, with whom they have a strong affinity. Below the nucleus of the mountains, on the waters of Little Missouri, the soil becomes of better quality, some tracts are extremely fertile. Indications of metals become more rare, timber is abundant, the prairies imperceptibly disappear. Pine and that species of oak known by the appellation of upland black oak are frequently met with in large bodies. Ash, linden, dogwood and other timber, the usual growth on good second rate land is likewise plentiful. The soil is adapted to the culture of small grain, to legumes, the potatoe, and almost every plant and herb suitable to the climate. Cotton, a plant demanding a moderately fertile soil for its production, will succeed on all the arable lands of Ouachitta. Gypsum has been discovered on Little Missouri, but never yet made use of by the inhabitants.

Salt springs, as they are loosely termed, have been found and some salt of good quality made. The term salt spring, conveys but a very imperfect idea of places where that mineral exists. At Mr. Postle-

thwait's salt works, near Natchitoches, the water is drawn from wells perforated in a sandy bottom similar to the beaches of a river. The number and extent of the salt plains of Louisiana is immense, and will render that indispensable mineral easy to procure in places the most remote from the sea. The existence of allum, salt petre, copperas and soda may not unreasonably be expected in a region where so many mineral indications are at every step encountered. Iron, the most useful of all metals, or in fact all substances not directly necessary to animal existence, may be manufactured on the Little Missouri, and other branches of Ouachitta from native ore. Whether the precious metals are to be found remains a desideratum. It also remains undetermined whether the production of gold and silver, in any country from mines contribute to the comfort, or happiness of its inhabitants. It is not always what is most really useful, that is sought by man with most avidity.

Few rivers differ more in the quantity of water at different seasons than the Ouachitta. Flowing from a hilly or mountainous tract, more constancy might be expected in the column of water; but though the places drained by the Little Missouri and Fourche of Cado are not deficient in springs, yet the extensive region towards the sources of Ouachitta have but little water, except what is supplied by rains in winter and spring. When the parching heats of summer have dried the extent above the mouth of the Little Missouri, the Ouachitta in the months of September and October, becomes very low as far south as the head of Black river. Cor-

rectly speaking, no branch of Ouachitta can be considered as well supplied with sources of spring water, though some spots are favorable exceptions.

About $33^{\circ} 10'$ of north latitude the Saline, a small river from the angle between Ouachitta and Arkansas, comes into the former river. The Saline rises twelve miles east of the Hot Springs, and pursuing a course nearly parallel to Ouachitta river, about 120 miles of comparative length, and is navigable seventy or eighty miles from its mouth with boats of considerable size in time of high water.

The Derbane, a beautiful little river which rises in the state of Louisiana, and has its principal source in N. lat. $32^{\circ} 50'$, W. long. $93^{\circ} 10'$, pursues nearly an eastern course of sixty miles comparative length, and enters Ouachitta from the west. The Derbane is navigable one half its course for large boats. Contrary to most other water courses in its neighborhood, this river is supplied by a great number of springs; its water is extremely pure. Some new settlements have been made, and many strips of fine land border the numerous creeks that contribute to form the Derbane. Singular as it may appear, this river though in the neighborhood of the first establishment on Ouachitta, made more than thirty years past, is a recent discovery; none of the maps hitherto published of that country indicate its existence. A ridge of hills enter the state of Louisiana nearly on 93° W. lon. winds a few miles south, divides the waters of the

Dacheet from those of the Derbane; then assuming a S. E. direction, divides the heads of Black lake, Saline and Ocatahoolu rivers from Derbane, reach the banks of Ouachitta in $32^{\circ} 15'$, range along that river until they finally disappear in $31^{\circ} 42'$ N. lat. The Derbane occupies the eastern slope of those hills. No prairies are found on this river; the whole extent from which its waters are drawn is a thick forest, composed of pine, oak, ash, hickory, linden, and almost every other forest tree found in the northern part of Louisiana. The pine occupies the hills and plains at a distance from the streams. Near the water courses many secondary bottoms or slopes are met with where the pine is found, admixed with oak, sweet gum and dogwood; the soil found in these places is of good quality for corn, cotton and small grain.

The Derbane like the Dacheet will admit of a scattered population over the face of the country, unlike the settlements along the margin of alluvial rivers, where a narrow strip of high land is bounded at a short distance from the water's edge by annually overflowed lands. Emigrants from a high dry country will find a congenial situation, not only on the Derbane, but on the east slope of Dacheet, on the Black lake and Saline waters.

Open pine woods covered in summer with an abundant succulent herbage, the slopes or points of projecting hills near the water courses wooded with oak, ash, sweet gum and other timbers that indicate

a second rate soil; with bottoms on the water subject to casual overflow, and covered with the most impenetrable underbrush, is the prominent physiognomy of all that part of the state of Louisiana, included between the Red and Ouachitta rivers.

The river Barthelemy falls into Ouachitta three miles below the Derbane, but from the contrary side. The Barthelemy rises near the Arkansaw, and has a course of upwards of an hundred miles of comparative length. The banks are high and not subject to inundation, composed of second rate land; some of the bottoms however are equal to any lands on Red river. The general course of the Barthelemy is from north to south: about one third and much the most valuable part of its length in the state of Louisiana, traversing the lands included in the grant made to Baron Bastrop, but now owned by a number of individuals. This grant being of so much importance from its extent and the interest it has excited, I have traced its outline on my map.

Few places can offer a more agreeable diversity of soil or surface than the ground claimed under this grant; 820,000 arpents of which are in the state of Louisiana, leaving an angle of 180,000 arpents in the territory of Missouri. Between the Ouachitta and Barthelemy the pine woods chequered with small prairie extend as low as their junction. The land here is mostly unproductive. The western margin of the Barthelemy presents less valuable soil than the eastern. Between the Barthe-

lemy and Boeuf the pine tract traverses the grant, and reaches as far south as the head of the Boeuf prairie. The pine region is interrupted by the two prairies, Merrouge and Jefferson of small extent, but excellent soil. Lands near the Boeuf and Maçon rivers are subject to annual overflow, rather from becoming stagnant by accumulation towards their mouths from the Mississippi, than from their own sources. Some part however of the banks of the Boeuf and Maçon are high enough to admit settlements of considerable extent.

The map will exhibit the very complicated conformation of the country. A few miles above its mouth an ancient channel leaves the Barthelemy, and winding southward through the pine woods about seven or eight miles enters the alluvial tract, and continuing its course, expanding into one or two small lakes, finally unites sixteen miles east from fort Miro, with another Bayou from the north. The former of these two waters by the absurd and conflicting nomenclature but too common in Louisiana, is called Bayou Boeuf, and the latter for reasons I know not, has received the appellation of Bayou Bon Idée. Their united streams, after running south five or six miles, leaves the grant of Bastrop, and continuing to flow nearly parallel to the Boeuf, unites with that river west of the Boeuf prairie. The whole length of the Bon Idée exceeds one hundred miles without estimating its numerous bends. A ridge of hills of little elevation begin first to be perceptible, a few miles south of the place where Bayou Boeuf leaves the

pine woods, which by a curious phenomenon pierces them in its way from Bayou Barthelemy to its junction with Bayou Bon Idée. North of the pass of Bayou Boeuf the hills gaining some more elevation, range a little east of north, come within one mile of prairie Mer Rouge, and continue to extend between the waters of Bon Idée and Barthelemy; between Barthelemy and Boeuf finally unite with the high lands near the Arkansaw. This ridge is a very distinct outline, and appears to have from very remote time, constituted a line of separation between the alluvial land to the east, and the comparatively primitive strata on the west. Where fractures expose the matter in these hills, they present the most regular structure of alternate sand, argillaceous, and calcareous earth, with a fine bolus of a heavy red colour; the latter in thin lamina. No stone or rock; no metallic indications are seen, every phasis demonstrate that though ancient when contrasted with the recent tract to the east; those hills are themselves the remains of fluviatic deposition.

Every object announce on a review of the tract under examination, that the quantity of water once flowing through the country was greater than what passes at present. This observation leads to a reflection upon the causes of the change that has evidently been effected, in the quantity of water that has formerly made its transit through Louisiana. Though the column that passes by the Mississippi and Red rivers is yet enormous, so many places bear the traces of water in rapid motion that are now above the reach of

that element that no reasonable doubt can remain after a careful survey of the country, of the diminution that the aquatic empire has experienced in Louisiana. The large rivers that flow into the Mississippi, from the west, and the scarcity and trifling size of those from the east, has contributed to change its bed. The Red, Ouachitta, Arkansaw and White rivers have, by the spoils brought from the inclined plane over which they flow, forced the great mass of waters in the Mississippi to range the eastern bluffs. But a change of bed could never have been the sole cause of the exemption from inundation, of places that are now twenty or thirty feet, above the highest water, that were evidently once periodically submerged. May not this revolution have drawn its causes from a change in the earth's centre? May not the time have existed when the Canadian lakes discharged the whole or part of their column down the Mississippi?—How very small difference in the inclination of the plane from lake Michigan towards the Mexican gulph, would produce the most extraordinary changes? Has not the straits of the Thracian Bosphorus and the Helespont been made by some such convulsion of nature? Did not the once deeply rooted tradition of the deluges of Deucalion and Ogyges, owe its origin to some real revolution, which threw the waters of a once extensive inland sea, into the Mediterranean; and in their march overwhelmed Thrace? Is not the Black sea the remains of a mass of water, once greatly more extensive? Did Louisiana experience a deluge similar to that which swept the peninsula, between the Euxine and Ionian seas?

Four or five miles below the efflux of the Bayou Boeuf, another ancient outlet, of similar nature, leaves Bayou Barthelemy and enters Ouachitta, in N. lat. $32^{\circ} 35'$ after a course of twenty-five miles, following the curve of the Bayou. This outlet has received the name of Bayou Siard, and for some distance forms the demarkation between Bastrop's grant, and another of large magnitude, made to the marquis de Maison Rouge. The latter grant includes, with the exception of a few small locations, the whole island included between Ouachitta, Barthelemy, and Bayou Siard. From where the Barthelemy enters Ouachitta, a chain of small prairies commence on the south side, and skirting the west margin of the Barthelemy and Siard, terminate about seven or eight miles from their beginning, when a similar chain continues to border the Siard, but on the contrary margin to its mouth.

The richest settlement yet made on Ouachitta, or its waters, is on this Bayou. The small prairies are of excellent soil, though rather flat. The depth of cultivalable land is not considerable, not exceeding a quarter of a mile, in general. The land from the Bayou quickly sinks into low flats, liable to immersion in time of rain, or the annual flood. It is a singular circumstance, that the line of prairie, terminating on one side, immediately continue on the other bank of Bayou Siard. Some land contained between this Bayou and Ouachitta, near the banks of the water, is sufficiently high for culture, but the interior is low and annually inundated. Pursuing the high outline of

this island, you find sweet gum, ash, black and white oak, sassafras, linden, and elm, with an entangled underwood of dogwood, spice, and other shrubbery, interwoven with vines of several species, amongst which the muscadine and wild grape predominate. Skirting the small prairies, and more or less along the whole margin, pine is admixed with the other timber. In the interior of the island is found cypress, the over-cup white oak, persimon, and several species of thorn, ash, and red elm. This island is about fifteen miles long, by a mean breadth of three, containing about twenty-five thousand acres, six thousand of which may be considered arable.

Wheat of excellent quality has been cultivated on the island, and no doubt, in addition to cotton, corn, and other vegetables, now the objects of culture, might be added most kinds of small grain; oats, rice, and barley particularly. A want of streams to work mills, will probably prevent the introduction of the cerealia east of Ouachitta, whilst their production must become general on the Derbane, and several other waters to the westward.

Riviere aux Boeufs, or Ox river, is the last and largest branch of Ouachitta. It rises in the angle formed between the Mississippi and Arkansaw, and pursues a course to the S. W. for some distance, then turning southward for seventy or eighty miles, enters the state of Louisiana, and a short distance farther, it crosses the N. E. line of Bastrop's grant, pursues a S. W. course through, leaving said grant near its

south angle, again re-assumes its direction to the southward, and after running about sixty miles comparative course, enters Ouachitta, above the W. point of the island of Sicily. The Boeuf is from its source in the Arkansaw lakes to the boundary of the state of Louisiana, about one hundred and twenty miles, and from thence to its mouth, nearly the same distance, producing a length of two hundred and forty miles, without attending to the complicated windings of the river. The Boeuf is navigable as far north as Prairie Mer Rouge. When the accumulation of water has replenished the swamps, the Boeuf river remains stagnant for a considerable distance above its mouth.

A strong brake of cane skirts the Boeuf nearly along its whole course through the state of Louisiana. Much land near its banks might be cultivated; but is mostly subject to casual inundation. Though the Boeuf prairie is not on the margin of the river, it is affected by the revolutions of that stream, the greatest part of the lands are liable to immersion. The prairie is mostly inhabited, and the soil is like most alluvial lands, very productive.

Below the mouth of Boeuf river, all the waters which form the Ouachitta being united, the river though not apparently larger than two hundred miles above, yet is much deeper, and may be navigated at all seasons. The first ledge of rocks that is seen from the mouth of the river, cross Ouachitta in a line with the west point of Sicily Island, and is

the base of the hills on each side. It is probable that this ledge is the same that forms the rapid of Red river, and continuing eastward has a subterraneous communication with the basis of the bluffs above Natchez. The mass of water in the Mississippi, and the quantity of mud and sand in its bed, will prevent those rocks from ever becoming visible; but from the aspect of the opposing bluffs west of Ouachitta, and east of Mississippi, by the bearing of the ledge from the rapids of Red river through the parish of Ocatahoolu, and through the space from the prairie of Ocatahoolu to Ouachitta, there can remain no reasonable doubt but they are the link that unite the western to the eastern banks of the Mississippi.

Below the mouth of Boeuf river, on the same side, Sicily Island rises from the bank of Ouachitta. This island, or rather isolated hill, is part of the remains of one of those argillaceous mountains, several other fragments of which are scattered over Louisiana. The discoverers of this elevated tract by a fancied resemblance in form, gave it the name it bears. The activity rises abruptly from Ouachitta river, and is clothed with pine and oak trees. The elevation is about 40 or 50 feet, and continues to preserve that height for some distance; but gradually sinks into the overflowed lands towards the Tensaw river. The island is about five miles wide, and slopes from north to south, having its penchant gradually declining into the lowlands. This place presents to the eye a new scene in any point of approach. Nothing can afford a greater contrast than the low sunken lands near the Tensaw

and the broken points of Sicily. It must excite pleasure and astonishment, to pass at once from swamps, timbered with cypress, ash, and white wood, bearing marks of annual overflow seven or eight feet; into elevations overgrown with cane, amongst pine, black oak, black walnut and poplar. Unlike the lands west of Ouachitta of equal elevation, the hill of Sicily is extremely fruitful, the surface a black loam.

Several settlements have been made upon this island, and a road from Natchez, traversing the inundated lands of Mississippi and Tensaw, passes through the settlement, one branch turning towards Boeuf prairie, and the other towards the establishments on Ocatahoolu and Red rivers.

Fourteen miles below the Boeuf, the Ouachitta loses its name by its union with the rivers Tensaw and Ocatahoolu. The singular small river Ocatahoolu is an example extremely striking, how near the surface of Louisiana approaches that of a real sphere. The map will exhibit the places from where this river draws its source, but no delineation upon a plane can convey correct ideas of the peculiar traits of its geography. The lake through which this river flows, is alternately a lake of water ten or fifteen feet deep, and an extensive grassy plain, the river winding through its centre, and receiving several fine creeks from the north, which in the season of inundation, empty themselves into the mass of water at the margin of the woods.

The same line of hills that form Sicily island range north of Ocatahoolu lake, and prairie; cross the Ocatahoolu river above the lake, and extends towards Red river. When the Mississippi is rising, the water flows with great force from Black river into the lake, and when the lake becomes replenished, the river is completely stagnant for many miles above. By a peculiarity the bottoms of the Dugdomoni or western branch is much more subject to overflow, than those of the main river, between the lake and its junction with Ouachitta or Black river.

From the N.W. extremity of the Ocatahoolu lake issues an outlet that must once have been the channel of the river. The supposition that the Red and Ouachitta rivers did not always unite their waters, will be noticed at length. A single glance of the eye is sufficient to convince the mind that the Ocatahoolu must have formed its junction with the Ouachitta in a position very different from the present. That the revolutions that have changed the very face of nature in Lower Louisiana, have not entirely been the effect of alluvion, appears almost demonstrable from an inspection of the banks of Red river, which are intermixed with marine shells, from the view of the numerous ruins of argillaceous hills, of which the Sicily island, Avoyelles, the Petite Anse, Grand Côte, Côte Blanche, and Belle Isle, are prominent remains.

The Tensaw river, though one of the constituent streams from which the Black river is formed, is itself

only a river of secondary formation.* The river Maçon issues from the large lakes or ancient channels of the Mississippi, north of the thirty-third degree of N. lat. and receives on its course to the southward many other outlets, particularly the Tensaw, which after their junction east of Sicily island, takes the name of the latter. Considerable tracts of land upon the margin of these rivers are sufficiently high to admit culture, and the soil equal to any other alluvial lands in Louisiana. Since the acquisition of the west bank of the Mississippi by the American government, establishments have been made on the river and lakes in its vicinity, by adventurers from several places, and amongst others the Mississippi territory. The Mississippi had on its west border, the parishes of Concordia and Warren, with a population of two thousand nine hundred people as early as 1810. Great damage has been done to this range by the floods of 1811, 1812, and 1813, particularly the latter. How far extensive embankments would protect the plantations from the water, remains yet undetermined. More difficulty will ever exist here than below Atchafalaya, in guarding against water, from the proximity to the great receptacle of the outlets, which, when surcharged, decreases the inclination of the plane from the Mississippi, and has a tendency to produce a reflow towards that river. This reflux is more dangerous and infinitely more difficult to prevent, than the inundation

* This term is, I believe, new; but I hope the reader will excuse its introduction since its brevity will save him the circumlocutory disquisitions on those streams that have their origin from the superabundance of their neighbors.

from the river itself. The Red river, when high, which generally happens coeval with the Mississippi, checks the discharge from Black river, and contributes in no small degree to regorge the mingling waters of Ouachitta and Tensaw, upon Concordia. In all floods, since 1800, this part of Louisiana has been more injured than any other near the banks of the Mississippi.

Whilst we have thus briefly surveyed the country of Ouachitta, many of its more minute features have been omitted, to make more lasting impressions on the mind ; of its most striking lineaments.

When a comparison is drawn of the relative productive soil, it will be seen, that the lands on Ouachitta and its tributaries, are capable of producing nourishment for one sixth part of the inhabitants of the state of Louisiana. Cotton will no doubt remain the staple commodity raised for market.

After the junction of Ouachitta, Tensaw and Ocatahoolu, the former loses its name, and the united stream is thence called Black river ; which latter, after a short and very winding course of thirty miles, unite with Red river.

The banks of Black river are very fertile ; but the cultivatable margin narrow, and subject to occasional submersion. This river is about 200 yards wide, the current gentle, and sufficient depth of water throughout the year for large boats. Thirty miles

below the mouth of Black river, the Red river joins the Mississippi.

The peninsula between Black and Red rivers and the Mississippi, is intersected by numerous small water courses, supplied from the Mississippi at high water; the land is generally low and clothed with a thick forest of ash, cypress, swamp white oak, elm, persimon, and other trees usually found on the annual overflowed lands of Louisiana.

It will be necessary to complete the review of this part of Louisiana, to again return to and take a more comprehensive survey of Red river.

From the best information Red river rises about thirty or forty miles east of Santa Fé, about 37° N. lat. and 105° W. long. from Greenwich, and pursuing a course S. E. by E. 450 miles, having a spur of the Caous on the left, receives the False Ouachitta from the north. The False Ouachitta rises in the Caous mountains, to the north of Red river, is a clear and beautiful stream nearly as large as Red river, and in quantity of water perhaps superior. These two rivers form a junction a short distance below the Panis, or Towiache towns, and about 70 miles lower down receives the Blue river from the north. The latter issues from the Caous mountains, runs nearly parallel to the False Ouachitta. The united waters of these rivers form Red river, now a large stream, turbid and brackish from the waters of Red river, properly so called, and Blue river. The Vaseux

(muddy or slimsy river) rises in the great prairie about N. lat. 36° , and 95° W. long. from Greenwich, runs S. W. 100 miles, turns south and enters Red river after a comparative course of about 200 miles. The Kimitchie rises near the head of the Vaseux, pursues nearly a similar course, winds round the western extremity of the Maserne mountains, falls into Red river about 50 miles below the entrance of the Vaseux. The Little river of the north rises in the Maserne mountains, is a clear and beautiful stream, its course extremely winding, though the comparative length does not exceed 150 miles from its source to its union with Red river, N. lat. 34° , and about 94° W. long. from Greenwich. The next stream worth notice that enters Red river, is the Little river of the south. This river rises in the prairies 40 miles S. E. of the Panis villages, runs nearly east about 150 miles, enters Red river 60 miles below the mouth of the Little river of the north.

From the source of Red river to the mouth of the Little river of the south, is about 600 miles in a direct line S. 60 E. the general course of the river; but estimating the windings of either the Red river, False Ouachitta, or Blue river, the distance must exceed 1000 miles. The Red river winds along the great inclined plane, dividing it nearly into two equal parts, and forming the limit between the waters that flow into the gulph of Mexico, and those that mingle with the Mississippi. The country from which the Red river draws its source is a vast prairie, except along the banks of the river, and even there the very little

timber is dwarf; the most abundant species is a variety of the black locust, called by the hunters musqueto wood. The range of low mountains are extremely naked of timber, though from the best information, abounding in calcareous substances. What could have left so vast a surface without forest trees, though possessing a soil capable of their production and growth, remains yet to be explained. This plain of open surface no doubt greatly influence the climate of Louisiana, and in fact that of all the continent of North America. This ocean of grass extends with partial interruption from the gulph of Mexico to the Northern ocean, and is certainly one of the most singular features of our globe, deserving an attention from the geographer and naturalist it has never yet obtained. Under the head of the climate of Louisiana, it will be necessary to enter more extensively into the examination of this remarkable region.*

* The following description will most forcibly exhibit the striking difference between the African and American deserts.

“Ludamar has for its northern boundary the great desert of Sahara. From the best inquiries I could make, this vast ocean of sand, which occupies so large a space in northern Africa, may be pronounced almost destitute of inhabitants, except where the scanty vegetation which appears in certain spots, affords pasturage for the flocks of a few miserable Arabs, who wander from one well to another. In other places, where the supply of water and pasturage is more abundant, small parties of the Moors have taken up their residence. Here they live in independent poverty, secure from the tyrannical government of Barbary. But the greater part of the desert being totally destitute of water, is seldom visited by any human being; unless where the trading caravans trace out their toilsome and dangerous route across it. In some parts of this extensive waste, the ground is covered with low stunted shrubs, which serve as land marks for the caravans, and furnish the camels with a

After the junction of the Blue river, Red river is navigable for boats of large size, during the spring floods, timber becomes more frequent and of larger size. At the mouth of the Vaseux the pine first occurs on the south side; the banks are elevated above inundation, and the land of good quality; the river here is much wider, than near the Mississippi. From the place where the Panis now reside, to the Avoyelles, the Red river will admit of settlement, and many of its tributary streams will in some future period, be the abode of civilized man. The banks are alternately woodland or prairie, until within twenty miles of the mouth of Little river of the south. Many ranges of strong cane occur between the prairies along the margin of the river.

The general growth of timber above the Little river of the north, is paccan and some other species of hickory; oak of different species, and some pine and cedar. Cypress first presents itself at the mouth of Little river of the north, about 34° N. lat.; but is not found in great quantity.

scanty forage. In other parts, the disconsolate wanderer, wherever he turns, sees nothing around him but a vast interminable expanse of sand and sky, a gloomy and barren void, where the eye finds no particular object to rest upon, and the mind is filled with painful apprehensions of perishing with thirst. "Surrounded by this dreary solitude, the traveller sees the dead bodies of birds that the violence of the winds has brought from happier regions, and as he ruminates on the fearful length of his remaining passage, listens with horror to the voice of the driving blast, the only sound that interrupts the awful repose of the desert."

Parke's Travels into the Interior of Africa.

The waters that enter Red river from the Maserne mountains, are pure, limpid, and excellent to drink ; but those that enter from the south are turbid and mostly brackish.

Below the mouth of Little river of the south, Red river assumes a south course, which it maintains upwards of 100 miles in a direct line.

The immense column of water brought down by the various streams that form Red river, cannot be contained within its bed during the spring floods, and about the 33° N. lat. first commences the alluvial banks. Here a total change takes place in the appearance of nature ; the shores become low, the species of timber such as are generally found along the banks of the Mississippi in corresponding latitudes, except by the winding of the stream, a pine bluff approaches the river brink. A chain of lakes commence on each side at a less or greater distance from the river. Those lakes are the natural deposit of a vast assemblage of water that would otherwise overflow the whole adjacent country.

There cannot remain a doubt after a careful review of the general aspect of the region from the head of lake Bodcau, to the town of Alexandria at the rapids, but that once the whole intermediate space formed a lake similar, except in extent, to the smaller lakes that yet remain. The earth that composes the numerous islets that are enclosed between the various branches of the river, is the spoils of the extensive

regions through which the Red river and its branches range from their source to the alluvial tract.

The beds of the lakes are much lower than that of the channel of the river. When we passed the Black lake in the month of September, 1811, after the great fresh of that year, the marks of high water on the trees along the shores were upwards of 20 feet above the then level of the water, whilst similar marks near the river, did not exhibit more than half the elevation. This fact proves that Red river, like the Mississippi, winds along the apex of a ridge; which receives a further elucidation from the excessive rapidity of the river Aux Canes, that flows from the main bed of the river, about one mile below Natchitoches.

The nature of those lakes is singular; from the appellation we would be led to believe them the constant repository of water, though in reality they are reservoirs emptied and filled annually by the hand of nature. In the fall months, after the waters have been drained by the depression of the river, the beds of most of the lakes become dry, and exhibit a meadow of succulent herbage, with channels for the waters that continue meandering through them. In the channels of most, there is a flux and reflux as the water in the river and lake preponderate in height. The Spanish lake and the Natchitoches lakes are examples. When the Red river commences its annual rise, the waters run with a strong current into the lake, which gradually filling, return the water into the river with equal velocity, when the depression of the

river, by the summer heats, begins to take place. This flux and reflux is continual; the channels that form the communication between the lakes and river, are never dry. Most of the lakes have the pine wood on one side of them, from which issue fine clear creeks of water, whose pelucid currents compensate to the inhabitants for the unpalatable waters of Red river. Were it not for those capacious depositories, the banks of Red river would be annually submerged and rendered unfit for settlement; no lands however can exceed them in fertility. From the upper part of lake Bistineau to the lower settlement of the Avoyelles, or to the mouth of Black river, the lands are generally high and fertile along both banks, and always on one side. The high lands or pine forests pursue on each side nearly the same course with the river, the creeks flowing from which abound with excellent water. Below the town of Alexandria, the hills retire in nearly opposite directions, one range towards Opelousas, and the other towards the river Ouachitta, and the river winding through the space between the northern extremity of the Avoyelles, and a point of the hills on the left side enter into the Delta of the Mississippi. Below this point Red river flows through low lands, the banks being liable to immersion.

The Red river enters the Mississippi at $31^{\circ} 01'$ N. lat. and $91^{\circ} 45'$ W. long. from Greenwich, and if we consider the Atchafalaya, as the continuation of the Red river, it leaves the Mississippi three miles below.

From an attentive observation of the Atchafalaya during the autumn of 1808, 1809 and 1810, we are much inclined to give credence to the general supposition, that at some past time the waters of the Red river and Mississippi did not intermingle. The appearance of the banks of each river, the colour of the strata and their position, scarce leave a doubt that the Atchafalaya was at some remote period the continuation of the Red river.

The point of confluence of those two mighty streams is one of those singular geographical positions that cannot be viewed without astonishment. To behold the alluvial banks, and the willow and cotton tree forests so familiar on the Mississippi, nothing peculiar would strike the eye on a cursory survey of this spot. The reader will, on a review of the map, behold a chain of Bayous, the first link united by the Bayou Robert to the Bayou Rapide, and winding south of Red river, and the Avoyelle island, and united to the Atchafalaya by Bayou de Glaize. The banks of the Bayou de Glaize and the lake Pearl out of which it issues, are high cane brake land, some feet above the annual inundation. This Bayou, or more correctly, its left bank, oppose an impassable dyke to the column of water brought down by Red river, Ouachitta and Mississippi, throwing the accumulated mass into the chute below the mouth of Red river. The opposing bank of the Mississippi, in a similar manner, confines the water within narrow compass. The peninsula formed by the Mississippi, opposite the entrance of Red river, is generally above overflow, but a very small

comparative quantity of water, even at the highest freshes, cross this point.

This assemblage of water, thus pressed into a passage not more than three miles wide, rush with great velocity. In some future day the government of the United States will become impressed with the importance of this spot. By pursuing the De Glaize, and the intermediate ground between its banks and Opelousas, a road can be made at a very moderate national expense, that would unite the two sides of the Delta, and enable travellers or armies to pass every season of the year.

From the efflux of the Atchafalaya to the Opelousas is thirty-six miles in a direct line, and the windings necessary for a road, would not exceed fifty miles; to which add fifteen from the efflux of the Atchafalaya to the high lands east of Mississippi, would amount to sixty-five miles from one extremity of the overflow to the opposite. The present circuitous route by water down the Mississippi and Plaquamines, and up the Courtableau and Atchafalaya to Opelousas, is from one point to the other upwards of two hundred miles. Should the raft ever be removed out of the Atchafalaya, the distance from the efflux of the river to Opelousas down its current to the mouth of Courtableau and up the latter river, will amount to seventy miles. A review of the saleable land claimed by the United States upon the tributary streams of the Atchafalaya, will more impressively exhibit the interest of the government in the improvement of this

region. This digression will be pardoned from the utility of the subject.

The rapidity of the current of the Atchafalaya, and the quantity of water drawn by its efflux from the Mississippi, is almost inconceivable; the point between Red river and Bayou de Glaize is much deeper overflowed than the height of the land would seem to render possible, and the column of the Atchafalaya very much augmented by the torrent that rushes over this peninsula.

During the spring freshes the water that runs out of the Mississippi, by the numerous lagoons or outlets below the Arkansaw, are received by the Bayou Maçon and Tensaw rivers, and thrown first into Black river, then into the Red river, and finally returned into the Mississippi; but as if proud in the majesty of strength, this mighty stream no sooner receives this great accession of force, than it discharges the auxiliary waters into the Atchafalaya.

From the Arkansaw to the mouth of the Mississippi the west bank of the latter river, is an inclined plane, the river being higher than the lands adjacent. The point made by the De Glaize confines the plane to not more than three miles in width; but it expands directly below the junction of that Bayou with the Atchafalaya. The waters that leave the Mississippi by the efflux, and below the Atchafalaya on the west never return to the parent stream. The numerous outlets between the efflux of Atchafalaya and the La Fourche,

contribute to augment the former river. Below the mouth of the De Glaize, the Atchafalaya commences to exhibit the same phasis with the Mississippi. The banks being too low to contain the body of water, it flows out mostly to the west, and forms on a smaller scale, a similar region with that between the mouth of the Arkansaw and the mouth of Red river. The overflow west of the Atchafalaya, is generally about six miles wide from the De Glaize to within a short distance of the mouth of the river Courtableau, where the breadth begins to dilate; west of that overflowed tract commences the cane brake lands of Bayou Rouge, Bayou Petite Prairie, and those of the Courtableau.

It may be remarked, that the quantity of surface inundated by the spring floods have been greatly overrated, particularly north of the Courtableau. Some of the finest cotton land in Louisiana, is found in places formerly supposed annually overflowed many feet. Extensive brakes of the arundo gigantea, or great cane, cover extensive tracts of the finest lands in North America.

In Pinkerton's Geography, printed in Philadelphia, the following sentence has found a place: "The
 " swamps are at all times even in the height of sum-
 " mer, for the most part, under water, and are dis-
 " tinguished from the rest of the country, by the
 " crouded stems of the cane arundo gigantea. The
 " light foliage of the tupeloo tree, nysa aquatica, the
 " taccamahaca, the fringe tree, and the white cedar,
 " the cupreses disticha."—*Vol. ii. p. 449.*

Mr. Pinkerton here alluded to the swamps of the Mississippi, and as we are now treating the subject, it may not be irrelevant to make some observations on the page above quoted. From the statement we would be led to conclude the land upon which the cane is found, subject to continual or partial submersion. Repeated observation has, however, proven that the cane is never the product of land subject to repeated inundation from the Mississippi floods. The margin of cane mark, with unerring precision, the line that separate the overflown lands from those that have been by repeated efforts of nature, wrested from the partial dominion of water. Cane, though always found in very rich land, mostly black or sandy loam, near the banks of rivers, creeks, or lakes, cannot exist in water, and perhaps of all culmiferous vegetables, would flourish longest without rain.

The tupeloo, known in Louisiana by the popular name of olive, from its fruit bearing a resemblance to that of the well known tree of the same name. The tupeloo so far from being the product of the inundated lands near the Mississippi or Atchafalaya, is seldom found in those places. Amongst the cane brakes, or near their margin, the ponds or lagoons, replenished by water from rain, are the native and exclusive seats of the tupeloo. These lagoons generally become dry in the fall season, have little underwood, except the dwarf, called by the French Bois de Marrais (swamp wood); which latter is in fact the largest bush or shrub found to exist with its roots continually immersed in water in Louisiana. The cypress (cupres-

sis disticha) is a tree more congenial to the overflowed lands ; but does not obtain the perfection of its growth generally, except in places very analogous to those that are natural to the tupeloo. These two species of timber are often found together. Within the slope that declines from the eastern and western bluffs towards the Mississippi, the greatest quantity of the cypress of Louisiana is found. The lands upon which the cypress grow, is however, at some season of the year, subject to immersion. This tree sometimes is found straggling along the margin of the cane brakes ; but when the land rises above every kind of overflow, becomes extremely rare.

Through the chain of overflowed lands that wind along the west margin of the Atchafalaya, the water rises in general about six feet, sometimes more, varying with the partial elevations of the surface of the earth, and declining in depth towards the western bluffs. The Bayous that rise in the slope, and enter the river, uniformly protrude a line of high land almost to the river bank, giving the form of semicircles to the bays of the overflow, between their mouths. Every Bayou within the alluvial tract, is in miniature the Mississippi; winding along the apex of a ridge, the land reclining from their banks, with outlets at high water, carrying the surplusage into the adjacent low grounds.

The Atchafalaya, from its efflux, has some lands along its left bank, above overflow, which reaches about eight miles, where the bank becomes subject to

partial inundation. The right bank from a very short distance below the efflux to the mouth of the Bayou de Glaize is liable to annual and deep submersion. Below the Glaize there is a narrow line of high land for seven or eight miles, when the right bank becomes like the left, subject to inundation, and is much more cut by the many outlets that carry the rising waters into the recesses of the swamp.

A general error has prevailed that the raft or body of timber that choaks this river, impedes the issue of water from Mississippi. A moment's examination of the map will serve to remove this impression. The distance from the Mississippi to the head of the raft is twenty-seven miles, and the current of the Atchafalaya extremely rapid. By the inclination of the plane, along which the Atchafalaya runs, and the irresistible impetus given to the stream by the peculiar assemblage of waters at its efflux ; this river suffers no diminution by the raft ; but the bank for some distance above, and contiguous to this enormous mass of timber, rendered much more liable to inundation.

From the great importance of the Atchafalaya as a channel of communication with some of the most valuable parts of Louisiana, and the singularity of this piece, the reader will indulge a discussion of some length on the subject.

From the course of the bend of the Mississippi, the incalculable quantity of trees that are annually brought down, are thrown mostly into the Atchafalaya, whose

efflux lies most favorable to their reception. A small island which, at the outlet, points with some inclination into the Mississippi, aids the direction of the trees into the Atchafalaya, into which, when once ingulphed, they are borne down with a rapidity that sets every obstacle at nought.

It is now about thirty-eight years since the raft first stopped in the river, and has been increasing ever since. The author of this sketch measured the banks of the river along the whole length of the raft, and some distance above and below, and who had the opportunity of examining its contents three successive years, can vouch for the following facts.

The mass of timber rises and falls with the water in the river, and at all seasons maintains an equal elevation above the surface. The tales that have been narrated respecting this phenomenon, its having timber of large size, and in many places being compact enough for horses to pass, are entirely void of truth. The raft is in fact subject to continual change of position, to which superadding its recent formation, render either the solidity of its structure, or the growth of large timber impossible. Some small willows and other aquatic bushes are frequently seen amongst the trees, but are too often destroyed by the shifting of the mass to acquire any considerable size. In the fall season, when the waters are low, the surface of the raft is perfectly covered by the most beautiful flora, whose varied dyes, and the hum of the honey bee, seen in thousands, compensate to the traveller for the deep silence and lonely appearance of nature at this

remote spot. The smooth surface of that part of the river, unoccupied by the raft, many species of papilionaceous flowers, and the recent growth of willow and cotton trees, relieve the sameness of the picture; even the aligator, otherwise the most loathsome and disgusting of animated beings, serve to increase the impressive solemnity of the scene.

“ Another Flora of bolder hues,
 “ And richer sweets, beyonds our garden’s pride,
 “ Along these lonely regions, where retir’d
 “ From little scenes of art, great Nature dwells
 “ In awful solitude. ——— ——— ”

The rafts, as marked on the map, were their position in 1808; but no doubt will be found on any future examination, much changed. Whether the raft can be removed, and the expense of the undertaking if practicable, has yet been a desideratum. The following estimate taken from admeasurement and observation on the spot, will give some idea of the quantity of timber, and the expense of its removal.

Ten miles of raft, multiplied by the width of the river generally, about 10 chains or 220 yards, will give the following result:—35,848,000 superficial feet = 286,784,000 solid feet = 2,240,500 solid cords, allowing the timber eight feet depth.

The distance between the extremities of the raft is upwards of twenty miles, but the whole distance not being filled up by timber, the aggregate of the raft in length is not far from ten miles, that distance was assumed as near the truth. The width of the river varies, but the medium width is about 220 yards.

How much it would contribute to the general benefit of the people of Louisiana, and of the western states, to open this river, is incalculable. From the proximity of some of the best public lands at the disposal of the United States government, it has a concurrent interest in removing the obstruction to general intercourse and the facility of emigration. The Bayou Rouge and Petite prairie, whose entrances into the Atchafalaya are opposite to the raft, have each, particularly the latter, great bodies of most excellent lands along their banks. At a moderate estimate, there must be on those two Bayous and adjacent, 60,000 acres of first rate public land. Many of the Bayous that enter from the east, flow through lands equally fertile with the west side, and it may safely be concluded, that not less than 100,000 acres of cane land are now rendered in a great measure useless, from the impediments to the navigation of the Atchafalaya. Boats from the western states, by entering the Atchafalaya, was it open, would have but very few impediments to encounter, to carry their cargoes to Opelousas and Attacapas; whilst those settlements, where stave timber is scarce along the Teche, could have their supply of an article so necessary in a sugar country, from the banks of the numerous streams that pervade the country above.

At the elevation of the spring floods, the back water of the Mississippi reaches up the Courtableau, above the Bayou Derbane, as far as the confluence of the Bayous Boeuf and Crocodile, rendering the column in the Courtableau, towards Opelousas, a dead mass of

water. Between the mouth of Derbane and the Portage, near Opelousas courthouse, in common years there would be no difficulty in bringing up flat bottom boats. The depth of water in the Courtableau, nearly to its head, is at high water 18 or 20 feet, and in 1811, in the month of June, the depth opposite the entrance of Bayou Wauksha was 25 feet. The banks of the Courtableau, from Opelousas, gradually decline, and at the entrance of the Derbane, and from that place to its mouth are annually overflowed. The cane decreases in size along the margin of the river, towards the inundated lands, and ceases near its verge, and is succeeded by the Fan Palmetto or Latania. The Latania can only exist where the inundation leaves its branches out of the water; where the overflow exceeds the vegetable in height, it entirely ceases.

From the mouth of Courtableau to the head of the Cow island, the breadth of the overflow between the Atchafalaya, Opelousas, and Attacapas, is about eight miles wide. This space is an immense lake, for many months; the currents of the smaller Bayous are lost in the maze, and only remain distinguishable by the openings of their channels. The many lakes that mingle with the outlets of the river, and with each other, render this region most inconceivably intricate. It is with the utmost difficulty that the real channel of even the river can be distinguished from the number of outlets and inlets, that wind in every direction. The forest trees are indicative of an inundated country; such as swamp white oak, indented-leaved red oak, bastard paccan, white wood,

persimon, cypress, though not abundant, some species of the thorn, a species of the honey locust, and other aquatic trees. Below the head of Cow island, on spots along the margin of the river, (mostly on the right bank,) which are above overflow, the quercus, sempervirens or evergreen oak, begins to appear, some of the candle berry myrtle, fringe the shores with its deep green foliage and impurpied fruit, here also appears spots of cane, but of no great extent, the narrow selvage of high land quickly receding into the dead overflow.

To have an idea of the dead silence, the awful loneliness, and dreary aspect of this region, it is necessary to visit the spot. Animated nature is banished; scarce a bird flits along to enliven the scenery. Natural beauty is not wanting, the varied windings, and intricate bendings of the lakes, relieve the sameness, whilst the rich green of the luxuriant growth of forest trees, the long line of woods melting into the distant sky, the multifarious tints of the willow, cotton, and other fluviatic trees, rendered venerable by the long train of waving moss, amuse the fancy. The imagination fleets back towards the birth of nature, when a new creation started from the deep, with all the freshness of mundane youth. There is no spot upon earth but the human mind can conceive objects of pleasure, where it is free to roam beyond the narrow precincts of a cold selfishness.

From the efflux of the Atchafalaya to the mouth of the Courtableau, the general course of the former

river is north and south thirty-six miles, in a direct line; fifty-three by water along the river. Below the Courtableau the Atchafalaya runs S. E. twenty-five miles by a direct line, or about thirty along the river. Below the Cow island the river turns almost due east, runs about thirty miles in that direction, (to the entrance of Plaquemines,) following the sinuosity of the stream, though not more than eighteen miles, following the comparative course. Between the Courtableau and the lower end of the Cow island, the general current at high water crosses the river obliquely, rushing into the lakes towards the Attacapas. The river here winds diagonally over an inclined plane, and when the swell of the waters rise above the banks, the water naturally flows down the direct slope. When the river assumes an eastern course, the current at high water is at right angles to the river. Within a short distance below the Cow island, there is a narrow slip of high land along the right bank cut into channels, called the Nine Brothers of Tensaw, which unite within a short distance from the head of the Attacapas lake, or lake Chetimaches. It would appear singular to any person to whom the cause was unknown, to find on descending the Atchafalaya below the Tensaws, the yellow waters of the Mississippi insensibly diminish, and the colour of the water in the river assumes the dark green tinge of the swamp water. This phenomenon is occasioned by a Bayou, whose banks are high land clothed with cane, which comes in from towards the Fause riviere, and enters the Atchafalaya a few miles below the lower Tensaw. The right bank of this Bayou throws the surplus

water of the Mississippi S. W. towards Cow island, and contributes to augment the inundation at that place. From the Tensas to the entrance of Plaquemines, the right shore is, except the outlets, above inundation; the land on the bank is of the first quality, but too narrow to admit extensive settlement. Persons navigating, at extreme high water from the Mississippi to Opelousas, or the upper part of the Attacapas, are obliged to sleep in their boats if benighted; between, from about seven miles above the Cow island; to either the mouth of Derbane on the Courtableau, or to Bayou Fusillier Landing.

Where the Atchafayala and Plaquemines form their junction, the united stream assumes a south course, which it maintains to the gulph of Mexico, the distance, by a meridian line fifty-four miles, or about seventy miles pursuing the river. A summary of all the distances gives the whole length of the Atchafalaya, by a comparative course, one hundred and thirty-three miles, and along the stream one hundred and ninety-three miles.

A description of the Atchafalaya from the Plaquemines to the mouth would be mere repetition. The general phasis remains the same as above. The vegetable productions in similar places are nearly alike. Towards the mouth of the Teche the quantity of arable land is much increased, and will greatly enhance the value of the lower parts of Attacapas.

A single glance upon the map will convince every

mind, acquainted with the geographical features of an alluvial country, that immense changes have taken place in the course of Red river. It will be noticed in a subsequent part of this work, that the Red river once washed the terrace of land that runs through Rapide county, Opelousas, and Attacapas. The hypothesis that the river took this direction is strengthened, by the peculiar manner that the river enters the Delta of the Mississippi. Viewing the proximity of the north part of the Avoyelle high land, to the opposing elevation north of Red river, the induction is irresistible, that the river acting upon the yielding materials of those hills, slowly formed a passage through, and joined the Black river, which latter must have contributed to the change.

The human mind is often inclined too much in favor of a preconceived theory, and receives as proof demonstrative, what only amounts to probability. After writing the article on the once greater elevation of the hills, and the changes made from their loose parts being carried down by the attrition of water, the author made a tour from Opelousas to the higher parts of the state of Louisiana, to ascertain the position of the rivers and Bayous, every step of which presented new proof of constant change convincing to his mind. The reiterated pains taken to establish the fact proceeds not from the pride of theory, but the conviction that many salutary improvements in the navigation of this valuable region, depend upon the demonstration of this change. It is of the utmost importance to convince the inhabitants of the state of Louisiana, or those persons

inclined to become settlers, how facile they can render a vast column of water, subservient to navigation. Where the streams have ever flown, they can again be directed either in whole or in part.

The distance from the western states, to the gulph of Mexico, can be shortened an hundred and twenty-seven miles by descending the Atchafalaya, in place of the Mississippi. There is much less difficulty to encounter, in entering the bay of Atchafalaya, than in entering the Mississippi. The rapidity of the stream continues in the Mississippi to the ocean, while the tide checks the current in the Atchafalaya above the lake Chetimaches, to the great raft.

Nothing but the contumacy of custom can influence the inhabitants of Attacapas, to neglect the advantages of their position, which in a commercial point of view, certainly equals any other spot in Louisiana. Nature has been more than usually beneficent to the Attacapas, the fertility of the land is excessive, and the facility of navigation is seldom exceeded. It demands comparatively but little from the hand of art, to complete the benefits of this favored spot.

The singular manner that the Teche river issues from the Opelousas, opens a new field of improvement. Below the confluence of the Bayous Boeuf and Crocodile, about four miles and a half the Bayou Carron unites itself to the Courtableau; two miles from the latter river, the Teche flows out of the Carron. When the waters are low, the current of

Carron enters the Courtableau, but in spring floods there is often a reflux in the Carron, which carries part of the Courtableau waters down the Teche.

By erecting a dyke, and lock, in the Courtableau, below the mouth of the Carron, the column of the Courtableau, would be directed towards Attacapas, or flow in its ancient channel, at the command of man. Where the plane of the earth's surface, so nearly represents the real curve superficies of a sphere, water is easily made subservient to canal improvement.

If ever the serious intention of realizing this attempt should be brought into agitation, no apprehension need be entertained against its practicability. From the great length of the two creeks that form the Courtableau, that river is not subject to any sudden rise, that would carry instantaneous destruction to works erected in its bed. The rise of waters, even when the Mississippi is low, is slow and gradual, and the waters would in reality, flow in their new course with equal facility as they did in their old channel. The river here washes the primitive hills, which it abandons for ever, at the spot pointed out for the lock; the hills then winding with the Carron. When the Mississippi rises, the waters of the Derbane and other Bayous, would form a reluctant current, and supply a canal of standing water below the dyke. Boats in coming up would meet with no impediment more than at present.

Another dyke and lock at the mouth of the western Fusillier, would unite the navigation of the Teche, and

Vermilion. An abundant supply of water flows in the spring season from Opelousas, by the Bayou Bourbieux, to aid in a high degree, the hand of art, on the Vermilion and Bayou Fusillier.

It is really an object, upon which the mind dwells with complacency; the infinite number of natural canals, that every where pervade the state of Louisiana; near the sea coast, and the margin of large rivers, running into each other like net work. Here art need only be directed by genius, and assisted by wealth, to lead to results on the future prosperity of the state, beyond the power of calculation. From the softness of the climate, and the fertility of the lands, many of the richer vegetable productions can be reared in abundance. Towards the gulph of Mexico, sugar, that most nutritive of all the gifts of nature, can be produced in any supposable quantity, to meet the demands of the western states. The late improvements on the use of steam, promise to remove the evils of encountering the current of rivers. Voyages at no distant period, from the gulph of Mexico to St. Louis, or Pittsburgh, will be held a mere matter of common notoriety, with vessels of any tonnage, suitable to the depth of water in the rivers, along which the voyage is performed. The flour, and other northern productions, will be exchanged for the sugar, cotton, rum, and indigo of Louisiana.

Places where similar facility is offered to improvement, are almost innumerable, from the outlets that unite the Mississippi, with Tensas, Ouachitta, and Black

rivers ; as also with Red river, Atchafalaya, Fourche, and by the Ibberville to lake Maurepas. A similar intermixture unite the Atchafalaya to the Courtableau, Teche, and Vermilion at several points. Scarce a single attempt could be carried into execution, without producing an almost instantaneous remuneration from the increased value of the adjacent lands. By the sale of public property, in the state of Louisiana, an extensive, and numerous population, will be planted within its limits, who must feel every stimulus to give themselves, the full enjoyment of the munificence of nature.

Viewing a map of Opelousas, and Attacapas, the most remarkable features in their geography are those prairies, naturally divided into eight grand divisions. The praries Grand Chevreuil ; Attacapas prairie between the Teche and Vermilion rivers ; the large prairie of Opelousas between the Vermilion and Mermentau rivers ; the Grand prairie, which commencing about eight miles north of Opelousas church, winds between the waters of the Teche and Courtableau ten miles north westwardly, then gradually turns to the south between Bayou Cane and Bayou Mellet, and terminates above their junction ; being thirty miles long. Next follow prairie Mamou, Calcasu, and finally the prairie between the Calcasu and Sabine rivers.

Prairie Grand Chevreuil.

Prairie grand Chevreuil, commences between the overflown lands of the Atchafalaya, and the Teche rivers, and following the direction of the latter river,

its northern extremity terminates eight miles east of Opelousas. This prairie being the high bank of the Teche river, seldom exceeds two miles in width, not often so much. That part of the prairie bordering on the Teche, is composed of a high rich margin of loam, extremely well adapted to the culture of cotton, tobacco, rice, Indian corn, and towards the lower extremity, the sugar cane. From the banks of the Teche, the prairie has an inclination towards the woods, that gives current to the waters which uniformly flow from the river. The Teche, like the Mississippi, has its bed on a comparative ridge. After the prairie commences; the inclination of the plane continues, and depresses the surface so considerably, that in many places the overflow of the Atchafalaya, enters the prairie, and in high freshes causes serious inconvenience to the crops. In the present season, 1811, the water in many places, as at Mr. Durald's, penetrated the prairie within a mile of the Teche. Immediately on entering the woods on the N. E. side of the prairie, the mark of overflow is perceived on the trees. Timber along the rich margin of the Teche is generally composed of several species of hickory; sycamore, sweet gum, black oak, red oak, willow oak, red elm, mucillaginous elm, linden, laurel magnolia, sassafras, and below $30^{\circ} 15' N.$ lat. some live oak. The muscadine grape vine, and smilax are found entwined round those large forest trees. The cane, though not of large growth, is found in the woods intermingled with palmetto. Many other trees are found of less note, such as the dogwood, red bud, and other dwarf trees.

The holly abounds. That singular tree called perhaps capriciously, the prickly ash, from the conical protuberances on its bark, the inside rind of which has an acrid aromatic taste. There is found also the prickly sumach, so called from a short sharp thorn on its bark and branches; from the end of the principal stem and branches a bunch of very fragrant flowers protrude themselves, which in the autumn are followed, by soft pulpy berries, having much of the appearance, and taste, of the bark of the aromatic herb, found in the middle states, and denominated spikenard.

To those who ascribe deleterious effects, from the proximity of stagnant water, the situation of persons living in prairie grand Chevreuil, will not appear very conducive to health. Time and experience has proven that there is but little difference, in point of salubrity, between this prairie, and those more remote from the borders of the inundation occasioned by the Mississippi. The fact being thus peremptorily asserted, so much in the face of prejudice, may need some illustration.

The lands that are inundated by the spring freshes in the low lands of the Atchafalaya, remain almost entirely devoid of water, on the retiring of the floods. No portion of woodland perhaps in America, is more completely without water in the fall season than this. Miles in succession of those regions, that we have in former times, consigned to eternal submersion, are in fact eight months of the year, almost totally deprived of water, for the ordinary necessities of animal exist-

ence. This observation will be found circumstantially correct in all the range that divides the Delta, from the prairies, or heights to eight or ten miles distance from either. Commencing at the Red river, and following the range of hills, that separate the Delta from the low ground, you will experience a very great want of water, in autumn and winter. When the spring rains commence in aid of the water brought down by the rivers, and the low country is laid under inundation, the water being fresh, from either the clouds, or northern latitudes, are of course not in a state to generate much miasma. Before the summer heats are excessive, they have commenced their departure, and by the beginning of August have mostly subsided. This accounts satisfactorily, for the health that often prevails in places, which to the eye, would appear unfavorably situated. The large lakes west of the Atchafalaya, are at too great distance, to have much effect on the atmosphere in prairie grand Chevreuil. No doubt but the small prairie called Prairie de Petit Bois, and the prairie on the Courtableau at the efflux of the lower Teche, were once connected with prairie grand Chevreuil; but timber having gradually incroached on the prairies, has closed the communication.

Attacapas Prairie.

This great prairie, lies between the Teche, and Vermilion rivers, and is drained by the waters of the latter, and Bayou Petite Anse, with some other small Bayous, that run into the marshes along the seacoast.

That particular feature in the history of Teche river, of its flowing along the apex of a ridge, is strikingly proven by the current of the water on the west side, as well as east. From the mouth of Bayou Fusillier no inlet, except from the lagunes along the banks, and within one or two hundred yards distance, enters the Teche. The plane assumes an immediate though gentle inclination, which drawing the water westwardly, throws it into the Vermilion. One fact, however, exhibits proof, how much the earth here approaches the surface of a real sphere; L'Housas lake, between Teche and Vermilion, discharges its waters N. W. directly in opposition to the Vermilion and Teche.

No tract of land on the globe, of equal extent, can exceed the margin of the Teche river, from the mouth of Fusillier to its own entrance into the Atchafalaya. The high cultivatable margin, may be at a medium, half a mile wide from the river outwards, but can, by the aid of drains, be augmented to any reasonable distance. By taking advantage of the natural drains, most of the prairie could be reclaimed. That this will be done progressively, as the price of lands increase, we cannot doubt. One remark may be made generally on Louisiana, that no country can afford more facilities, to invite artificial improvement. Water as an agent, when it can be commanded by human genius, either in the transportation of heavy weights, or, in the operation of mechanics, will perhaps for ever remain the most useful servant of man. An eye cast on the map of Attacapas, will at a glance perceive

the ease, with which a canal can be drawn to unite the water of the Teche, Vermilion and Mermentau with each other, and the Mississippi. That this communication must be opened, if they remain in the hands of a free and active people, will not be doubted, and the very performance will secure the tenure, to the then possessors. A numerous, happy and wealthy race of men would be found, on spots now covered with grass and woods. But to return: The lands bordering on the Teche afford but little timber on the S. W. side; there is not found often any timber outside of the lagoon, and the space between that and the banks is about 100 yards. Below the Fusillier the timber is generally black oak, white oak, and live oak, with some sweet gum. The ridge without the lagoon is composed of an upper stratum of remarkable black friable loam, of a foot or eighteen inches deep, resting on an ochreous earth, of a reddish yellow colour. The plane reclines backwards into an earth, hard, soapy and more admixed with the ochre. The soil decreases in fertility, but is still, what would in most countries be esteemed a very rich productive land. The sward of native grass is always heavy, and admixed with very luxuriant herbage, congenial to the soil. As this work has been undertaken, not from botanical motives, but to exhibit the capabilities for settlement in Louisiana, much detail relating to natural history will, of course be avoided. A remark, which I have uniformly had reason to make, is that the timber is generally in much greater quantities, on the left side of the rivers and Bayous of Opelousas and Attacapas, than on the right. The prairie of Attacapas from its commence-

ment, below the junction of the Teche and Fusillier, runs generally, a little east of south, varying in width from one to three miles; fifteen miles, when it at once expands to upwards of twelve miles wide. The Bayou Tortue, or the outlet of L'Housas lake affords but little timber; but on passing west of it, you first from the Mississippi meet any considerable elevation of surface. Here the earth rises into bold promontories of forty or fifty feet in height. → Ascending to the summit of this elevated tract, you at once perceive a manifest change in the vegetation, and whether real, or from ideas associated with actual elevation, a most salutary alteration in the air. This ridge will be noticed elsewhere. The Teche and Vermilion here recede from each other. The Vermilion assuming a S. W. course, which it preserves about twenty-five miles. The hills not being elevated from the general surface, but rather like an abbatis, presenting a percipitous front on one side, sloping away imperceptibly on the other. The waters that fall by rain in the prairies, either run into the Vermilion by its numerous inlets, or into the Petite Anse Bayou, which running southwardly, falls into the Vermilion bay. The land along the margin of the prairie on the side of the Vermilion, is of an excellent quality for cotton, corn, tobacco, indigo, rice, and below 30° N. lat. sugar cane would no doubt reward the planter for its culture. Though the soil is here of a very distinct species, and certainly not so extremely productive as that of the Teche, yet the same kind of farming would no doubt succeed. The lands on the Petite Anse and Bayou Salé, approximate to that

of the Vermilion much more than to the Teche, though some springs of fresh water exude from the hills, yet not in quantity sufficient to afford water to the inhabitants, who resort to wells, which rarely have to be sunk fifty feet, before water is found. Some good salt has been made from water drawn from wells in the south part of this prairie, and no doubt could be manufactured in any given quantity.

This general description will answer for this prairie, the map will exhibit its form to the eye. The coast between, and including the Atchafalaya and Vermilion bay, is much the most important part of the coast of the state of Louisiana, west of the mouth of the Mississippi, and demands the most scrupulous attention, and will be particularly noticed in the sequel.

Opelousas Prairie.

This vast extent of natural meadow exceeds seventy miles, S. W. and N. E. is twenty-five miles wide, and contains more than 1,120,000 acres, exclusive of the numerous points of woods that fringe its margin on all sides, except along the gulph. This prairie begins thirteen miles N. W. of Opelousas church, and gradually opening to the southward, sends out various branches between the Bayous. Its east margin is a grand outline of soil and vegetation; along this border the lands are fertile, and considerably diversified in surface. The indigenous timber trees are the sweet gum, black oak, three species; white oak, four or five species; cypress, though scarce, sycamore, black

walnut, ash, three or four species; poplar, elm, four species; maple, laurel magnolia in vast quantities, sassafras, honey locust, two species; linden, catalpa, holly and some others. The dwarf trees are the dogwood, iron wood, horn beam, black thorn, papaw (in the woods near the church of Opelousas,) elder, candleberry, myrtle, towards the gulph. Many species of grape vines, saw brier, and other climbers.

In the woods to the right, or on the waters of the Mermentau, the poplar ceases entirely, and comparatively the linden and laurel; the magnolia also becomes scarce. The oak and hickory exhibit nearly the same variety, with an exception respecting the large black oak, and the overcup white oak, which is not found in great quantity. On the waters of the Mellet and Plaquemine Brulé, the pine is found in considerable bodies and of very large growth.

When you leave the waters that communicate with the Vermilion, the soil becomes at once perceptibly more sterile, and the general surface of the earth more flat. In the bodies of the prairie between the Mellet and Plaquemine Brulé; between the eastern and western branches of the latter Bayou; and between the Brulé and the Queue Tortue, the lands are of a third rate quality. The surface of the earth is still more flat than on the left side of the prairie, of course more wet. The gullies that drain the prairie, uniformly make points of woods, indenting the prairie, to one or two miles distance; in the vicinage of those points, the lands are generally of better quality, and

always less liable to overflow than the residue of the prairie. Cotton, indigo, Indian corn, rice, and even tobacco, may be cultivated by using manure. No lands retain any artificial manure with more tenacity. The stratum upon which the mould rests, is a stiff brown clay, which resists the introduction of any body through it with great obstinacy; water cannot escape through it but slowly, and after depositing almost every foreign matter with which it is impregnated. After piercing this clay, you find a kind of whitish earth often mixed with nodules resembling iron ore, which is one foot or more in depth, and, succeeded by a bluish clay, or red ochreous earth resembling in appearance and texture the clay that compose the banks of Red river. Bodies of a very pure sand is often found, but its existence is by no means uniform. The well water in this tract is generally good, seldom having any disagreeable smell or taste, but what is drawn from the wood that composes the walls of the wells. It is a felicitous circumstance, that in all the country comprized in Opelousas and Attacapas, scarce any place but where well water can be procured, at no considerable distance from the surface of the earth. In most places the wells do not exceed thirty or forty feet in depth. The use of water hunters are not resorted to; Bletonic mummery is not necessary, every man may choose the cite for his well as he would for his house, to suit his convenience.

Here you behold those vast herds of cattle which afford subsistence to the natives, and the inhabitants of the city of New Orleans. It is certainly one of the most

agreeable views in nature, to behold from a point of elevation, thousands of horses and cows, of all sizes, scattered over the interminable mead, intermingled in wild confusion. The mind feels a glow of corresponding innocent enjoyment, with those useful and inoffensive animals grazing in a sea of plenty. If the active horsemen that guard them, would keep their distance, fancy would transport us backwards into the pastoral ages. When we estimate the extent of ground that must for ever remain covered with grass, it is no extravagant declaration to call this one of the meadows of America. Its extent affords some comparison with the empire of which it belongs, being in round numbers about an eight hundredth part. Allowing an animal to be produced annually from each five acres, more than two hundred and twenty thousand can be reared, and transported from this prairie alone, which at an average of ten dollars per head, would exceed to 2,400,000 dollars. This calculation will, I know, appear extravagant, but is certainly not exaggerated beyond practicability; so much has nature done for a country where even sterile lands are the sources of wealth, ease, and human happiness. The time is not remote, when the bacon and flour of the western states, will be repaid by the sugar, cotton, beef and hides of Louisiana. The advantages resulting to the United States from the possession of that country are every moment developing themselves.

The prairie below the 30° N. lat. except on the Teche, becomes extremely marshy, gradually sinks

below the flow of the tide, and becomes impassable to man or beast. This frieze of marsh, however, runs along the gulph of Mexico, almost the whole length of coast that borders Louisiana; impenetrable except through the rivers. From the Pearle to the Sabine, the seacoast cannot be reached by land from the interior in more than three or four places, all of which are west of Atchafalaya.

Grand Prairie.

This prairie begins eight miles north of Opelousas church, and running about fifteen miles N. W. is bounded on one side, by the woods of Bayou Crocodile, and Bayou Chicot, and on the other by the woods of Bayou Grand Louis. It then assumes a S. W. direction about twenty-five miles, having the woods of Grand Louis and Mellet Bayou S. E. and the woods of Bayou Cane on the N. W. terminates a short distance above the confluence of the Cane and Mellet. This prairie is from two, to five miles wide. The lands on the borders of the woods that communicate with the Teche and Courtableau, are uniformly of better quality than those more S. W. The woods here afford all the variety of forest trees, dwarf, and climbers, mentioned in the account of the east side of the Opelousas prairie; like that prairie the soil is extremely retentive of manure. It would be mere repetition to treat more largely of either the soil or natural productions of this prairie; the observations made on each head will apply to this equally with that of Opelousas. It may be noted how

ever, that west of this prairie, the cane is found as high as 30° 40' in the Bayou Cane woods.

' *Prairie Mamou.*

On entering this prairie, you will at once perceive a great change of soil, vegetation, and in the physiognomy of the woods. Occupying the extent between the Nezpique and Cane Bayous, this prairie preserves the general course of those Bayous, and may be assumed at forty miles long by five wide, without much danger of error. The soil is of an inferior quality to that in the grand prairie. The woods are composed of oak of almost every species, and pine, with underwood of dogwood and whortleberry. The laurel, magnolia, linden, and other trees indicative of rich land are rare. Towards the mouth of the Bayou Cane, cypress swamps abound on both sides of the prairie, particularly on the Nezpique. On the margin of the water that species of sassafras known by the local name of sweet bay, is found intermingled with the water elm, and other aquatic trees and shrubs. The arundo gigantea, or forest cane dwindles here to a dwarf, and is but seldom found. In the low grounds near the river, the palmetto, called by the French latania, abounds, but not of the gigantic size of its kindred species on the more eastern waters. Some species of the laurel is found in the pine and oak woods.

The prairie Mamou is devoted by the present inhabitants to the rearing of cattle, some of the largest

herds in Opelousas are within its precincts. Three rich stockholders have, as if by consent, settled their vacheries in three distinct prairies. Mr. Wikoff, in the Calcasu prairie, west of the Nezpiqué, Mr. Fontenot in prairie Mamou; and Mr. Andrus in Opelousas prairie. Those three gentlemen must have collectively, at the moment this article is written, fifteen or twenty thousand head of neat cattle, with several hundred horses and mules. It may be presumed that Mr. Wikoff is at this time the greatest pastoral farmer in the United States.

In prairie Mamou, you encounter, in great numbers, mounts of earth, ten or twelve feet wide, twelve or eighteen inches high, scattered in immense variety over the whole plain. The origin of those hillocks have given birth to many speculations; all perhaps wide of the truth; the most reasonable hypothesis ascribe them to a kind of mole. These elevations are much more fertile than the other parts of the prairie, the high growth and deep green colour of the herbage, give to the prairie where they abound a singular and diversified appearance.

Though pastoral pursuits will, it may be presumed, occupy the attention of persons settling in prairie Mamou, from its remote situation in respect to markets and the sterility of the soil; yet it by no means follows that agriculture might not be pursued to advantage. The lands, though certainly very far inferior to those more eastward, are capable of great improvement. Excellent timber abound for the uses

of carpenter's work and for enclosing farms. The oak timber, in reality, is much superior to that found on the borders of the Teche, and other rivers interlocking with the Atchafalaya. The tide flows up the Plaquemine Brulé and Nezpiqué, far above the southern limit of this prairie. The rivers are deep and will afford a good navigation. When numbers and wealth will invite commerce into the Mermentau, some place near the mouth of Nezpiqué must become the seat of an extensive foreign and domestic trade. The quantity of cypress timber, and its superior excellence on the Mermentau and its branches, will afford great facility in building, when the current of emigration will bring it into demand.

Prairie Calcasu.

This extent of grass is from N. E. to S. W. fifty miles long and twenty miles wide, having more than 640,000 acres of land.

The soil along the east border, on the Nezpiqué, is of second rate quality, its surface is rather more waving than Prairie Mamou. Along the Mermentau the prairie exhibits gentle swells, which relieve the eye from the dull monotony of the unvaried plain. The west margin of the upper lake in the Mermentau is a most beautiful slope, rising with gentle acclivity twenty or thirty feet, and falling by a more imperceptible declination into the general expanse of the prairie. Some of the most elegant situations for building in Opelousas are found here. The lake upwards of a mile

wide and more than six long, spreading under the eye, diversified with one or two small islands covered with trees, the interminable expanse bounding the view on all sides, except limited, and relieved by the woods on the Mermentau to the north, or the small clumps of wood scattered in pleasing confusion in every direction.

Below this lake, timber ceases on both sides of the river, which here swells to 400 yards wide, bordered by a very narrow bank of shells on one side, and the impassable morass on the other, having depth of water for large vessels. All possibility of settlement ceases. Twenty miles below the Little lake, following the stream, the river opens into another ten miles wide by twenty long. The channel less deep, and more uncertain. At the west extremity of this lake, the Bayou Lacasine comes in from the N. W. The latter Bayou may be considered the drain of this prairie. Below the Lacasine the Mermentau again contracts to its usual size, and pursuing a course S. W. fifteen miles, sometimes dilated into the form of a lake, enters the gulph of Mexico. Like the other prairies of Opelousas and Attacapas that communicate with the sea, its marine extremity is an impenetrable morass, except through the rivers. The Lacasine has no wood on its banks, many miles above its junction with the lake, its channel is deep enough for large vessels. After wood commences, the adjacent prairie rises above the marsh. Some good soil is found, but not of large extent. The forest timber are oaks of several species, pine, ash, hickory, cypress, and tupeloo. The dwarf trees on the higher lands are dogwood,

and whortleberry. The east branch of this Bayou remains navigable after the wood ceases. The other branches dwindle to gullies, on leaving the prairie. Not more than twenty or thirty families could be comfortably fixed on this Bayou. Most of the land remains to the United States, though three or four claims are surveyed on the east side. Between the Lacasine and the pine woods on the north, and the Mermentau river on the east, the face of the earth exhibits an expanse of grass, interrupted only by an occasional clump of oak or pine trees, that resemble isolated savages, trembling alone from age to age. After passing Lacasine, the same monotony again re-assumes dominion. The winds breathe over the pathless waste of savannah. The wild fowl is seen flitting, or the deer skimming over the plain. The clouds of heaven close the picture on the south; while fading in the horizon, the far seen woods, raise their blue tops between the prairie and the sky, in every other direction.

At any considerable distance from the woods, the land is sterile, and even near or in the forest, is of a very unpromising texture. We are led to think this region healthy, not many of the causes that produce destructive miasma, exist here. The truth of this position is proven by the few persons that have settled on either part of this prairie. Grazing will, it is most likely, be the prevailing pursuit of the inhabitants of this part of Louisiana. In almost every place west of the Teche and Vermilion woods, many inducements must operate to give that current to their employ-

ments. But as the population of the banks of the Mississippi increases in numbers, and creates an accumulated demand for beef, butter, tallow, hides, and cheese ; shipments of those articles will be made directly from the mouths of the Atchafalaya, Vermilion, Mermentau, Calcasu, and Sabine rivers. Salt can be manufactured to any amount, in many places near the coast ; which will render that necessary article cheap. It may not be irrelevant to remark here, that nature and art will combine, to render the banks of the Mississippi the peculiar seat of abundance. The inexhaustible stores of provisions from the northern waters, combined with the boundless pastures to the west, give a facility, and certainty of supply nowhere else found, in so eminent a degree, on our globe. The very poverty of the soil in many places conduces to produce this consequence by compelling to pastoral pursuits.

The Sabine Prairie.

Of this prairie little need be said. The land between the Calcasu and Sabine near the sea shore, is very similar to the Calcasu prairie ; soil thin and extremely flat. The prairie diversified by clumps of that species of oak known by the name of black jack, intermingled with pine, both indicative of a sterile soil. The importance of this prairie will arise from its position, rather than from its intrinsic value, either as respects soil or timber.

Having thus closed this general view of the prairies of Opelousas and Attacapas, it will be necessary to

pass on to the delineation, of another less prominent, but not less important feature in their geography; that ridge of hills, which divides this region into two very distinctive portions. It will no doubt excite the astonishment of many, why so much importance should be attached to elevations, so very small above the general level, as the hills in question. To ignorance and prepossession no explanatory observations can avail, and to the candid eye of science, none are necessary. The Andes or Alps do not make a more determinate outline than do the hills that are the subject of the present enquiry. Though humble in their comparative height, they designate a boundary perhaps coeval with our planet, and which will remain for an unlimited time a prominent feature in the physiogomy of our country. Civil and political boundaries, though often influenced by the grand distinctions of nature, are more frequently capricious; liable to change, and to be replaced by others equally subject to mutation. But mountains, rivers, hills, and other permanent features remain nearly the same, throughout the lapse of ages. The alterations occasioned by the agency of volcanoes, earthquakes, or even water acting generally upon refractory materials, are very slow. If the state of astronomical and geographical science, had enabled Strabo and Ptolomy, to have clearly defined the lasting natural land marks mentioned in their works, it may be presumed that we would have no difficulty to recognize the same places, with very little alteration. Water is certainly the matter which, by its universality and motion, produce the greatest effects on the surface of our globe. The gravity of all solid bodies

creates an undeviating tendency to lower hills, and raise vallies, or to speak more intelligibly, to make the earth more and more rotund. Rain, brooks, rivulets, rivers and tides, are in hourly operation, to produce this effect.

The hills of Opelousas and Attacapas first begin to assume perceptible elevation at New Iberia, $30^{\circ} 03'$ N. lat. The point of land upon which the old Spanish works have been constructed, and from which the place has taken its name, is built upon its spur. Extravagant as the assertion may appear, it is a safe conclusion, that those hills are an extension of the mountains that give source to Red river and Arkansaw, and in fact, pervade the continent in its whole length. I must, from the nature of the subject, wander far beyond the limits of Opelousas or Attacapas in search of documents to substantiate the foregoing hypothesis. The reader will pardon the excursion, when he reflects that the digression aids a general view of our continent.

After detecting those hills at New Iberia, they are found at once to leave the Teche, and wind a little west of north, and in a few miles attain an elevation of twenty or thirty feet. The soil upon their summits is excellent, but without timber. Encountering the Vermilion, they are but little diverted out of their course, and beyond that river are again perceived in the Opelousas prairie, pursuing the same course, and having nearly a similar elevation. The fine settlement between the Côte Gélé and Carrion Crow is upon this ridge, the prairie totally devoid of timber, except

along the margin of the Vermilion, below the limit of the hills. This description of surface continues until above the Carrion Crow; when the hills are, for the first time, covered with timber. That bay of the Opelousas prairie, known by the name of the Grand Coteaux, is part of this ridge. It then forms the Belvue settlement, the settlement around Opelousas church, and continues northward; again meets the upper waters of Teche, at their efflux from Bayou Carron. Here the hills are extremely irregular in their height and direction, and covered with wood. The banks of the Courtableau, on the west side, at the Opelousas landing, again afford an opportunity of observing the tract, which continues along or very near the margin of the river, above the confluence of Bayou Boeuf and Crocodile. They then follow the direction of the Crocodile, through the wood land east of Grand prairie, until the Bayou Chicot enters the Crocodile. It will now be necessary to return, and again following this ridge, notice some of the obvious consequences of its elevation and position, upon the physical conformation of our country. It has been observed, when treating of the prairie Grand Chevreuil, that the Teche flows along a comparative ridge; the earth gradually reclining from its banks. To account for the present situation of the country, between this ridge and the overflow of the Atchafalaya, it will be necessary to have recourse to fluvial deposition, no other principle can solve the phenomena.

What was the original configuration of our planet, is a secret I presume wrapt in the womb of inscrutable

obscurity. But correct observation upon the present situation of many places, affords ample means of estimating their ancient conformation, that only yield to actual demonstration, in the conviction they carry to the mind. We premise, that this work will afford few examples of hypothesis; their general emptiness is too well ascertained to render their repetition pardonable, but in the present instance, it is of importance to possess some data, to proceed from, in developing the present and future state of the surface of so important a section of our continent.

The assumption may be risked, that the ridge now under consideration, was at some remote period of time, much more elevated than at present. This conjecture arrays itself in the irresistible arms of truth, when we view the adjacent country on either side. No stone or pebbles are found admixed with the earth, to resist the action of water, in depressing the more elevated parts; and depositing them in the low grounds. From the aspect of the various small Bayous that run from the prairie Grand Chevreuil towards the Atchafalaya, their course is extremely serpentine. The Bayou Fusillier, that forms a part of the boundary between the S. E. parts of Opelousas and the N. W. parts of the Attacapas, and unites with Atchafalaya, is very winding in its course. That this should take place in a region where the surface of the earth is composed of such unresisting materials, can only rise from the supposition, that great changes have been effected in past times. The sediment gradually washed from the abutment of the hills, imperceptibly

filled the slope between their base and the low grounds yet subject to annual submersion. That a much greater column of water once flowed along those bluffs, through the Boeuf, Crocodile, Courtableau, and Teche, can hardly be doubted. The outlets that issue from the Courtableau, such as Fusillier, could never have formed their channels in the present order of things. No water issues out of the Courtableau into them, except in the spring floods, when the whole plain is under submersion. It is obvious, that in such situation, the water, so far from seeking a circuitous channel, would spread itself through the woods. Time was when those channels now dry eight months of the year, must have been replenished at every casual rise of the Courtableau. Their deep wide channels, unnecessary for their water at this time, aid the supposition. The slow current of the stream, as it now flows through them, would never have worn a channel of any kind; more particularly, one wide and deep sufficient to carry, ten or twenty times the water that passes through them, at that time of the year when the Mississippi and Red river are low.

It is above human power to point out the changes that have taken place, since the time when this globe came fashioned from the hand of an Almighty Maker; who elevated the mountains, formed basins for the sea, and sunk channels for the rivers, and who, by his omnipotence, gave this earth its then form. But we may, however, be indulged in the reasonable supposition, that the elevated parts of the globe are primi-

tive, rather than thrown up from its own bowels by any internal cause. Not one continent or island, but the globe in all its parts, produces demonstrative evidence of the anterior elevation of the earth, and its gradual decomposition, and removal by the abrasion of water. This cause has certainly contributed to widen the extent of land, and lessen the empire of water. The eastuary of almost every river, creek, or Bayou, are eternal monuments to attest the fact. But alluvion, like all other causes, must, to produce effects, possess its concomitants; which, as respects alluvion, are particles that can be removed, water, as agent to remove them; and an inclined plane as a laboratory. The meanest capacity, who can reflect upon the subject, will be convinced, that, in cases of aquatic deposition, the plane must hourly become less inclined, consequently a decrement of effect. This decrement continuing to operate, until the effect, if any, becomes so minute, as to remain imperceptible for ages. That the alluvion that formed the tract now under review, has undergone almost every stage of its progress, we have ample reason to conclude. The increase of soil, or change in the exterior of the earth, though still in minute operation, have, by the gradual assimilation of the earth to a sphere, ceased to operate, except in a very slow process. The Courtableau, unlike most rivers, does not flow down the descent of an inclined plane, but diagonally across its surface. When the spring floods are at their height, the water that flows from the Atchafalaya crosses the Courtableau. This fact, to which I have been often a witness, was one of the circumstances that led to the chain of thought,

that has produced many of the conclusions detailed in this work. It is difficult to resist the induction, that the Courtableau owes its existence to the same general cause that has operated to give the present appearance to the country from which it flows.

In periods of time beyond human skill to limit, the water of Red river must have flowed along those bluffs in large quantities. Sediment brought down, and gradually deposited, assisted in filling up the space, and finally, in a great measure, prevent the issue of water through this passage. The similarity of the clay banks of the Teche, with those of Bayou Boeuf and Red river, render the foregoing supposition reasonable.

Bayou Grand Louis, issuing from the prairie of Opelousas, and Grand prairie, has contributed more towards influencing the present course of the Courtableau, than from its column, would at first view be thought possible. The whole valley made by this Bayou has been formed by the drain of the prairie. The Bayou Crocodile, above and below its junction with the Boeuf, preserves its ancient channel along the bluffs, until encountering the embankment made by Bayou Grand Louis; the waters are turned S. E. into Courtableau, and forced to abandon their former and natural channel down the present Teche. At the very point where the Bayou Grand Louis leaves the hills, it divides into two branches, one turning north into Bayou Courtableau, and the other winding about two miles along the bluffs and then abandons them.

This south branch, after running five miles, receives another outlet from the Courtableau. The united streams forming the Teche. Below their junction, at the prairie Petite Bois, the banks have a perfect resemblance to Red river. The channel greatly too large ever to have been made by a stream of water equal to what now flows through it.

If, as we suppose, the Atchafalaya was the ancient bed of Red river; and there is strong reason to believe the fact, the present Teche must then have been merely the upper outlet of Red river, and the present Courtableau a counter channel, from one branch to the other. Many similar instances now in existence, may be seen upon the map.

We have been more minute in the investigation of this subject, from a conviction that the enquiry must lead to more rational ideas on the geological history of the country under review. It is a subject, unnoticed by any previous writer as far as we are informed. The reader will indulge minute and even often tedious detail, on a subject involving a knowledge, not of the small tract of land under examination, but all that long range of productive soil, that stretches along the east side of the western bluffs, of the Mississippi, from the gulph of Mexico to the mouth of Missouri river.

The extremely fertile flats, or rather slopes found along the White, St. Francis, Arkansaw, Ouachitta, Red, and Teche rivers, are to a very great degree analogous in their texture and appearance; and no doubt

are susceptible of similar improvement. We may pronounce those lands to have been to a great depth below the present surface, the product of alluvion, and that in distant and remote time; a large bay, reaching from the eastern to the western bluffs, penetrated the continent in the direction of the Mississippi. This bay has been filled above the ordinary level of the water, by accretion of soil. The whole delta bears evident marks of this revolution. But the slope along the western bluffs, being raised above, not only the common level of the sea and rivers, but above the influx of the tide, and the highest annual flood must have acquired an addition of matter from some other store of materials, or has been elevated by other causes.

It is a singular fact, that the Mississippi in its long course, from the mouth of Ohio to Baton Rouge, washes the eastern bluffs; indeed from the mouth of Ohio to the sea, the Mississippi not once comes in contact with the western embankments of the valley through which it flows. From the ruinous appearance of the eastern bluffs, continually falling in fragments, it is evident the river is still slowly, but incessantly progressing eastward.

This curious fact, is capable of an easy explication, from the single circumstance, that at all the large tributary rivers enter Mississippi from the west, carrying with them clay and sand. This never ceasing process, has tended to fill the western slope of the valley, and to confine the waters of the Mississippi to the eastern side.

During the autumns of 1807, 1808, and 1809, the writer had frequent opportunities to view the banks of the Atchafalaya at low water, which afforded the best chance of examining the different strata of which they were composed. The upper stratum is invariably of bluish clay, common to the banks of the Mississippi; this is usually followed by a stratum of red ochreous earth peculiar to Red river, under which, the blue clay of the Mississippi was again to be perceived. The foregoing arrangement admits of but little variety.

This leads to a conclusion inevitable from the premises, that the waters of the Mississippi have alternately penetrated and deserted this channel. The Red river, when passing the western bluffs, (at very remote ages,) most likely did not unite with Black river. Red river itself, together with Bayou Boeuf, formed an embankment which irresistibly forced the channel eastward, and in process of time united with Black river. After such union, a very large part of the waters of Red river still continued to flow through the ancient channel, which in reality they do at this time, during very high floods, though not in large quantity. The Bayou Robert is the present connection between Red river and Bayou Boeuf.

Bayou Boeuf and Bayou Crocodile are the two constituent streams that form the Courtableau river, and both have their respective sources in the pine forests north of Opelousas; are fine streams and of excellent water.

Bayou Boeuf rises in the parish of Rapide, about eighteen miles S. W. from the town of Alexandria; pursues a N. E. course of ten or twelve miles, enters the low lands of Bayou Rapide, which it approaches within one hundred yards, then turns E. and S. E. by south; which latter course it maintains to its union with Crocodile. Bayou Robert, an ancient outlet of Red river, leaves Rapide Bayou two miles from Alexandria, and after a course of twelve miles nearly southward, falls into Bayou Boeuf. Three miles below Bayou Robert, Bayou Boeuf divides, discharging part of its water eastward, forming Bayou Le Mourier. The main stream continues to flow towards Opelousas, and three miles below the efflux of Le Mourier receives Bayou Clair from the west. Bayou Clair is the last accessory stream of the Boeuf; the remainder of its course, is about sixty miles; its breadth is never much more or less than twenty yards; but much deeper, and having a larger volume than its humble breadth would indicate.

The Boeuf is by far the most beautiful stream that is found in Louisiana within the alluvial soil; its current is constant, though gentle, its water, clear and pure. From the efflux of Bayou Robert to the mouth of the Boeuf, (following the meanders of the stream,) exceeds eighty miles; both banks a continued line of excellent land, once entirely covered with the large cane; the depth of arable soil about forty perches; often nearly a mile.

If cultivatable, and wood land, are both brought

into the estimate; upwards of 100,000 acres of first rate land is upon the banks of the Bayou Boeuf; timber near the margin, black oak, poplar, white oak, sweet gum, black walnut, red oak, and ash; the soil of Bayou Boeuf is peculiarly adapted to the culture of cotton.

Bayou Crocodile rises in the same hills with the Boeuf, and pursuing a similar course, has nearly the same length. The lands upon the heads of the Crocodile, being mostly pine forest, are generally sterile, though some good second rate soil is found near the water courses. Advancing towards the mouth, the area of arable surface augments, but in all its length, the Crocodile presents a less valuable margin than the Boeuf. As a resource for timber for Opelousas and Attacapas, those two rivers are very favourably situated; much of the plank and scantling now used in the former place are already prepared at the saw mills on Bayou Boeuf, and transported down in boats or rafts.

Between the Rapides and mouth of Red river, on its south bank, occurs the Avoyelle prairie. This singular prairie is about sixteen miles long, and three broad, lying upon a comparative hill, composed of nearly similar materials, with the embankment opposite to it, west of the Bayou Boeuf. Fifteen miles to the south of Avoyelles, another hill rises out of the swamps extremely similar in its general appearance to the former. Both hills are about one elevation, fifteen or twenty feet.

Is not the deduction warrantable, that those hills, are two detached prominences of the same chain with the hills north of Red river?

They are now become elevated planes, though not reduced to such an undeviating level as the extensive prairies to the S. W. They are, indeed, allowing for the difference in soil and vegetation, more assimilated to the opposing pine flats. The relative position of those prairies or hills will appear upon the map.

Any further theoretical speculation is deemed needless here, as the foregoing hypothesis will be much better understood from a faithful delineation of the country on the map, than by any geological detail.

Woodlands are scarce along the right bank of the Teche, and will, no doubt, oblige the inhabitants in process of time, to have recourse to planting and rearing forest trees. Much land, too wet for culture, and placed in situations beyond the power of drains, (except by great expence,) would perfectly suit many of the most useful species of timber, such as the ash, the bignonia catalpha, many kinds of oak and hickory. The cypress, from its slow growth, will perhaps never become an object of culture.*

* Judge Lewis, who is at present owner of the lands along the west bank of the Teche, immediately below the Fusillier, intends attempting the culture of sugar cane; should the laudable attempt succeed, the value of the Teche will then be more fully developed. As hinted above, the quantity of productive soil can be augmented by drains perhaps to 200,000 acres.

An acre of sugar cane will, in ordinary seasons, produce more than 1000 pounds of sugar; which, at a moderate price, will amount to more clear profit than any other product yet cultivated in Louisiana. But this subject will come more correctly under the head of agriculture.

The great body of the present inhabitants of Attacapas, are ranged along the Teche. The rich emigrants that are removing, or that have removed to Attacapas, have generally turned their views towards the Teche. This current of emigration must continue whilst the lands are cheap, the superior excellence of which, and the climate, give them a decided preference over any other body of land of equal extent, west of the Mississippi.

General outline of Attacapas.

That part of the state of Louisiana, known by the name of Attacapas, is bounded south by the gulph of Mexico, N. W. by Opelousas, N. E. by the Atchafalaya, and on the east by the Atchafalaya and the lakes appertaining to that river. The greatest length of Attacapas, is its base along the gulph of Mexico, about 115 miles from the mouth of Atchafalaya to the mouth of the Mermentau. From the mouth of Mermentau to the mouth of Courtableau, is about 90 miles, and from the mouth of the latter river to the entrance of the Atchafalaya into the gulph of Mexico, the distance is nearly the same. Attacapas forms a scalene triangle, whose area amounts to 5100 square miles; the

present population (1811) (ascertained by the census of 1810) less than two persons to the square mile.

The principal rivers of Attacapas, are the Atchafalaya, Teche, Vermilion, and Mermentau.

Teche River.

This river, from its position, claims more notice from the political economist and geographer, than either its length or quantity of water would seem to justify; it enters Attacapas at its junction with the Fusillier, pursuing a course of a little east of south twenty-eight miles, to New Iberia, where it has attained depth of water for vessels of considerable burthen. The tide flows thus far but does not rise high enough to benefit the navigation considerably. The river now assumes nearly a S. E. course, and winding about forty-five miles, loses itself in the Atchafalaya. The distances here given are along the general course, the bendings of the river would extend the whole distance that the Teche winds through Attacapas, to more than 100 miles. When this river enters the Atchafalaya it is upwards of 200 yards wide, and 20 to 30 feet deep. It may be noticed as a singular circumstance that this river does not receive any tributary streams in its whole range through Attacapas: it may be further remarked that the Teche never rises within many feet of the elevation of its banks, of course unlike the Mississippi; never overflowing the lands on its margin.

The Teche, except when there has been a recent, and very heavy rain in Opelousas, has but very little current. At low water in the fall season, there is no perceivable flow of water above the reach of the tide. It will not be a great departure from fact, to state the whole length of the Teche in Attacapas, at one hundred and thirty miles, and the distance on each side, arable, at one mile in depth; this will give 166,400 acres of land, capable of culture.

The foregoing quantity of acres might be very much augmented by artificial drains, which considering the invaluable quality of the soil, will no doubt be carried into effect.

Vermilion River.

This river, like the Teche, has its source in Opelousas, and enters Attacapas at the mouth of Carrion Crow; it then runs south about sixteen miles, then winds to the west, and receives from the south the Bayou Tortue, continues west eight miles, passes the ridge of hills, (a ramification of which winds along each bank some distance) and assumes a S. W. course, which it maintains twenty-five miles.

When the Vermilion enters the hills, it then appears to have augmented to a size sufficiently large to justify the title of river, though it has that appellation below the Carrion Crow. The tide in autumn is perceivable thus high, the current of the river at all times rather gentle.

After this river has completed its S. W. course, it then winds S. E. by S. twenty miles; the whole length of its comparative course in Attacapas being sixty-nine or seventy miles, but the distance, pursuing the windings of the stream, must exceed 100 miles.

The two vast prairies known by the names of Opelousas, and Attacapas, extend themselves on each side of the Vermilion, through its whole traverse, from its entrance into Attacapas, to its egress into the gulph of Mexico.

Wood is much more abundant along the Vermilion than on the Teche, and though the soil may be inferior in fertility, it is nevertheless excellent, and the quantity greater, on an equal length of river.

There is certainly eighty miles of the banks of the Vermilion, which have an extension backwards of two miles, which affords three hundred and twenty superficial miles, or 204,800 acres.

This is by no means an exaggerated calculation for the productive surface within the bounds of the Vermilion and its tributary bayous. Some of the most beautiful settlements yet made in the Attacapas, are upon this river. From the diversity in soil, and elevation, there is no risk in giving the preference in beauty of appearance to the banks of the Vermilion, over any other river in Louisiana; south of Bayou Boeuf.

If situations favorable to health, united to the most agreeable prospects, which are bounded but by the horizon, should be sought after; were taste to select sites for building, its research would here be required, and be gratified by the breezes which come direct from the bosom of the ocean; fancy itself could not form a more delightful range than the Carrion Crow and Côte Gélé settlements.

On leaving the dead level of the Teche, or the almost flat extension of the Opelousas prairie, the eye is enchanted on finding its range of vision, which not unaptly might be compared to the waves of the ocean when a storm has suddenly subsided. If a bold extent of view can give vigour to the imagination; if the increase in the powers of intellect bear any proportion to the sweep of the eye; upon one of those eminencies ought a seat of learning to be established: there the youthful valetudinarian of the north, would, in the warm, soft, and vivifying air of the south, find his health restored, and his soul enlarged. Astonishing as it may sound to many, we do not hesitate to pronounce this, together with the general range of hills from Opelousas, as the most healthy and agreeable near the alluvial land of Louisiana.

The lower parts of the Vermilion, no doubt, will suit the culture of sugar cane, whilst the whole extent of its banks are well adapted to cotton and corn. Observations respecting the products will be found under the head of agriculture.

The Vermilion, by its union with the gulph, forms the natural communication of its inhabitants with the sea. The time is not far remote when many thousands of people will exist on the shores of this river, the fruits of whose industry will be taken to market with much more facility than through the present difficult and circuitous route. The depth of water through the inlet into the Vermilion will not admit vessels of very considerable burthen. How far the channel may be improved by human power, would be impossible to state at present; and whether the difficulty of entering not only the Vermilion, but every other river in Louisiana, can be considered an evil, in either a moral or political view, there is much reason to doubt.

Whilst the European world plumes itself more upon its power of doing injury, than upon either reason, justice, or humanity, the more the internal parts of our country are fenced by nature the better. Perseverance will give skill to navigate all our rivers, whilst their shallow inlets and intricate channels will set foreign invasion at defiance.

The shell banks and deep morasses of Louisiana, have always been considered by the writer as a bulwark that will contribute to the safety and happiness of the people of the country they enclose. It is an incontrovertible fact, that from the mouth of the Sabine, to the mouth of the Atchafalaya, not one spot is found where an army of a thousand men could land with its implements of war, and penetrate the interior, except through the rivers, and when the

rivers are examined, it is felicitous to reflect, that a small body of determinate troops on their banks, could, by choosing their ground, repel very superior numbers. Few places in the range specified could be traversed, (except through the bayous or rivers) by any human power, without opening a canal through the fens that every where line the sea coast.

Queue Tortue.

This bayou claims attention as forming in its whole length the boundary between Opelousas and Attacapas. It has its source in the Opelousas prairie 30° 15' N. lat. its course is generally a little south of west; its length by comparative course twenty-five miles, but with the bayou perhaps thirty-five. This bayou enters the Mermentau about two miles above the Little lake, where the tide is found to flow.

The lands on the Queue Tortue are of very inferior quality to those on the Vermilion; the timber consists of various species of oak, hickory, some ash, and other forest trees; and towards its mouth large cypress and tupeloo swamps. Like all the western parts of Attacapas and Opelousas the lands on this bayou will always be devoted to grazing. The sterility of the soil will at any rate for a length of time arrest extensive attempts in agriculture.

The Opelousas prairie, sweeps along both sides of the Queue Tortue, and to the south of this bayou, recedes into the morass of the gulph of Mexico.

Carrion Crow.

Rises in the Opelousas prairie, not far from the head of the Queue Tortue, and pursuing an opposite direction in all its length, forms a part of the boundary between Opelousas and Attacapas. From the point where the woods first commence on this bayou, to its mouth, is not more than ten miles. The excellence of the soil, in some measure, compensates for the shortness of its course.

There must be at least forty sections of land on this bayou capable of being immediately cultivated without the necessity of being drained, which amount to 25,600 acres, at 640 acres to the section. But little of this, is yet under cultivation, though some good farms are found along both sides of the woods, and are annually increasing.

Bayou Fusillier.

That branch of the Vermilion that comes from Opelousas, is known by the name of the bayou Bourbé, by the inhabitants, and after leaving the hills, divides into two channels, one of which winding south, unites with the Carrion Crow, and forms the Vermilion, the other winds east, and unites with the Teche, under the name of Fusillier.

This small bayou not more than four miles in length, would merit no attention in a system of geo-

graphy, if it did not form a limit, between the two portions of country, Opelousas and Attacapas. It is further illustrative, how near the country here, approaches the real curve of a sphere; the water as if balanced, scarcely can determine its course.

This bayou must not be confounded with another bearing the same appellation, and indebted for their names to the same person; the eastern Fusillier, is in reality a stream of much greater importance than the one now treated of.

It has been observed, when speaking of the Courtableau, that it flows diagonally over an inclined plane: When the spring floods have filled the swamps with water, and the Courtableau becomes replenished beyond its capacity of retention, it is, (though on a small scale) similar to the Atchafalaya; its redundancy being carried off by an indefinite number of outlets, that mostly lose themselves in the waste of the woods.

Some narrow outlets, whose channels are of considerable depth remain perceptible at low water. Bayou Fusillier is one of those outlets, which having its efflux from the Courtableau about two miles below the Derbane, pursues a south course about twelve miles, extremely serpentine in its windings, and approaching the prairie grand Chevreuil within a short distance, turns east towards the Atchafalaya, and finally loses itself in the intermixture of lakes that enchain that river on the west side. When the bayou Fusillier, assumes its eastern course, from prairie grand

Chevreuil, its meanders become still more serpentine; its width never exceeds sixty or seventy feet, yet this is the channel of communication with the Mississippi from some of the most flourishing parts of Opelousas and Attacapas. Not a single spot of land on the banks of this bayou can be rendered secure from the annual overflow of the swamps, by the Atchafalaya; and is a lasting monument of a revolution in the range of waters through this region. It would not only be improbable, but impossible, that water would naturally form a determinate course in this place. At the elevation of the spring floods, the swamps are entirely filled with water, and all the small bayous are lost in the universal inundation; whilst in autumn the valley is devoid of water, except comparatively in a stagnant state.

A fact which may not be irrelevantly related here, will suffice to show, how slowly changes in the face of nature, are effected by water.

Above the efflux of the Fusillier, and nearly opposite the Derbane, the marks of overflow are at the distance of a mile from the bayous, four feet high on the trees; yet there are in this dreary waste six or seven of those little mounts, or barrows, found over almost all America, and the north of Europe and Asia.

In the year 1808, when first discovered by the author, they were beyond the reach of overflow, and covered with timber, indicative of high land; such

as black oak, sassafras, and ash, but more particularly three different species of vegetables, were found, never known to occupy lands subject to annual immersion, viz. black gum, holly, and the muscadine grape vine. The latter, like the large cane, though found near the margin of the inundated lands, is never found within their limits.

Those mounts are about seven or eight feet higher than the water mark on the trees; and are scattered to some distance from each other, without arrangement.

The alluvial lands on the Teche, are six miles distant, most of the intervening space liable to inundation. The spot where the barrows are found is a cypress swamp, a drain of which, passes the space occupied by those sylvan towers. One of the smallest of them is broken by the action of the water. When we reflect upon the length of time necessary for such piles of earth, after their erection, to assume the antique form they exhibit at present, and to cover themselves with timber suitable to their exemption from overflow; the seeds of which timber, must have been translated casually from a considerable distance; we are struck with the conviction, that many ages past the adjacent country was nearly in the same state that it is at present. Many theories concerning the causes or intent of such monuments, are much weakened, by the situation of those now treated of.

Not even a village of savages, could have existed throughout the year, within several miles of this

place. The spot where they are situated, is more dreary and sunken, than any other part of the swamp. There is much reason to doubt the correctness of the opinion, that those elevations were erected for either temples or dwellings; the probability is much greater, that they were cemeteries raised on the field of battle, containing the bones of the ancient warriors of Louisiana.

Human pride, has every where erected monuments to perpetuate the crimes, follies, and miseries of mankind. Monuments, themselves, perishable as the hands that built them. Whether the marble of Greece, the porphyry of Egypt, or the clay of the Atchafalaya; time sinks them all to eternal ruin. The pyramids of the Nile, and the barrows of the Mississippi, attest alike, the weakness, and evanescence of human greatness.

The water which flows from the slope of the Teche, enters the bayou Fusillier; and at the landing place, receives another branch from the southward; which also rising east of the Teche, drains a part of the prairie of Grand Chevreuil.

South west of the Teche, a number of small bayous rise, and flow into the Vermilion and Atchafalaya bays. The most remarkable of these streams are, the Petite Anse, Bayou Cypriere Mort, (dead cypress) Bayou Carline, Bayou Salé, and the Myrtle Bayou. Some good arable land lies upon the Bayou Cypriere Mort, and Bayou Salé, rendered more valuable, as

being within the climate suitable for sugar cane. The intermediate space between those water courses, like other parts of the coast of Louisiana, is morass.

The area contiguous to lake Chetimaches is an entire overflow. The banks of Atchafalaya, from the mouth of Plaquemines to Berwicks bay, afford very little surface, not annually submerged. Opposite Berwicks bay, a prolongation of the high land of Teche, reaches the right bank of Atchafalaya, and skirts that river about six miles, where the overflow of the sea commences. Another range of alluvial highland protrudes itself to the left bank of Atchafalaya, on the east side of Berwicks bay. This latter strip of land is the bank of Bayou Boeuf. Here the waters of Atchafalaya, are compressed into the breadth of the river. The Teche on one side, and the Boeuf on the other, turning the overflowed surplus into the main stream; out of which it does not again escape, until the whole mass is lost in the gulph of Mexico.

The island formed by the Mississippi, Atchafalaya, Bayou Boeuf, and the Fourche, is, except the banks of the former and latter streams, annually overflowed. The timber most prevalent on this island, and that enclosed between the Teche river, and lake Chetimaches, is composed of the same species usually produced by the inundated lands of Louisiana; cypress, ash, swamp white oak, hackberry, and persimon. On the island east of Atchafalaya, are several lakes; the most noted of which are, Natchez, Palourde, and Verret.

West of lake Natchez, a raft lies in the Atchafalaya, which obliges persons navigating in the river to leave its current, and pass by the lake. Two very small inlets unite the extremities of the lake with the river.

Point Coupée island, enclosed between the Mississippi, Atchafalaya, and Plaquemines contains, independent of the bank of the former, an extensive surface of excellent arable land. The settlement of the Fause Riviere, or ancient bed of the Mississippi river, is about thirty miles long, and the land having the general character of the Mississippi banks needs no particular description.

The Gros Tête, a large bayou, has its source south of Fause riviere, and running nearly a south course thirty miles, falls into bayou Plaquemine. This bayou has much excellent land upon its margin, covered with large cane; but subject to casual inundation. Bayou Maringouin, rises N. W. of Fause riviere, and winding round its western extremity, assumes a course nearly parallel to the Gros Tête, falls into Atchafalaya, below Cow island. The banks of the latter bayou are mostly above overflow, the soil like that of the Gros Tête.

Bayou Mourir leaves the Mississippi at the northern extremity of Point Coupée island, and falls into Atchafalaya, after a course of fifteen miles. The land on the Mourir is above overflow, covered with cane

to the depth of from a quarter to half a mile from the margin of the stream.

Between Bayou Maringouin and Atchafalaya river, and in general in the intermediate space between the water courses, Point Coupée island, is annually overflowed. The timber varies with the diversities of soil and surface, and corresponds in every respect, to that of other parts of the adjacent country.

The river Lafourche, leaves the right bank of the Mississippi 30 miles below the efflux of Plaquemines, and pursues nearly a S. E. by S. course, ninety miles, falls into the gulph of Mexico, at $28^{\circ} 58' N.$ lat. and $90^{\circ} 30' W.$ lon. Following the winding of the stream, the Fourche exceeds one hundred and twenty miles in length, ninety of which are settled. The whole extent of the banks of this river, is within the sugar region. Many sugar houses are established, and the culture of the cane gaining annual increase. In point of soil, surface, timber, and every other respect, the Fourche presents a reduced picture of the Mississippi.

Between the Fourche and Atchafalaya, south of lake Palourde, passes bayou Boeuf, entering the latter river, at the lower extremity of Berwicks bay.* Bayou Boeuf, is formed from several streams, that rise east of lake Palourde, and unite with an outlet of that lake. The margin of bayou Boeuf, and bayou

* Berwicks bay, is an unmeaning appellation given to a dilatation of Atchafalaya river, below the mouth of Teche; use will most probably perpetuate the name.

Black, is an alluvial soil, of quality equal to any in Louisiana; covered with strong cane, and heavy timber. West of Lafourche and south of bayou Boeuf, rise a number of small streams, that run nearly south into the gulph of Mexico. The upper parts of Derbane, the grand and Petit Caillou, bayou Peau de Chevreuil, (deer skin) and bayou du Large possess a soil, equal to that on the Boeuf. Timber, however, ceases upon the banks of those latter waters, fifteen or twenty miles above their egress into the gulph. Trees are rare, upon the Fourche twenty or thirty miles above its mouth, and entirely disappear some distance from the sea.

Below the efflux of Lafourche, the lands after leaving the banks of the river, are too monotonous to demand much detailed description; mostly morass, devoid of trees, and sunk to nearly the level of high tide. The space between the Mississippi, Fourche, and gulph of Mexico; chequered with lakes, and interlocking bayous, will be better understood from the map, than verbal description. The plane, stretching between the left shore of the Mississippi, and lake Pontchartrain, lake Borgne, and Chandeleur bay, has characteristics in common, with that sloping from the opposing bank of the Mississippi, and demands no additional description.

Every spot of land in Louisiana, below the thirtieth degree of latitude, that is sufficiently elevated to be made arable, must become valuable, from the climate admitting the growth of sugar cane. The culture of

the cane, as well as of most other crops in Louisiana, will be more particularly noted under the succeeding head.

Mississippi River.

Many treatises have been written upon this great river; but few correct philosophical ideas respecting it have been published. The causes of its rise and fall, the revolutions in its quantity of water, and the changes of its course, have been too obvious to permit mistake; but the laws of its general motion, and the real rapidity of the stream, have been but little understood.

We may lay down the following as the universal law of the motion of water. It moves with equal velocity, in equal times, at equal depths, on equally inclined planes.

The preceding law, when once understood, is like that of gravitation; too obvious in its principles to permit doubt. The consequence of its application to rivers, is that their waters at equal elevations, move equal distances, in equal times; therefore, when swelled by accretion of water, no additional velocity is communicated to the decumbent volume. If rain produces an accumulation near the sources of rivers, a greater inclination is given to the surface; therefore an increased rapidity is the consequence; but the decumbent waters continuing to move upon the same plane, retains an uniform motion.

Either from inattention to the principles of hydraulics, or from assuming the velocity of the surface as that of the mass; the motion of all rivers have been overrated. Respecting none, has ignorance of their true motion led to more erroneous conclusions, than the stream of the Mississippi.

Presenting the following observations upon that very important river, we are far from pretending that our inductions will all be clearly drawn from correct reasoning upon the phenomena under review. We will exhibit the facts to the public, and give as far as our means of information extend, an accurate view of the Estuary, of the greatest river in the United States territory; and the longest and largest stream of this globe, whose whole course lies within one sovereignty.

From the 33° N. lat. to the mouth of Red river, only one bank of the Mississippi is in the state of Louisiana, the distance three hundred and six miles. From the mouth of Red river to the sea, (following the meanders of the river) is three hundred and twenty-six miles. Fifty miles above the entrance, the banks are too low for cultivation, therefore the arable lands below Red river, including both banks, may be estimated at five hundred and fifty miles, and adding in round numbers, three hundred miles above Red river, gives 850 miles, as the cultivatable border of the Mississippi, within the state of Louisiana. In making an estimate of the quantity of cultivatable soil, and woodland, that would be adequate to a farm-

ing establishment, one mile and a half may be assumed as the mean depth, which ought to be included in an evaluation of the river lands: this data would produce 1,275 square miles, or 826,000 acres, as the arable superficies of fluviatic soil, adjacent to the Mississippi, below the 33° of N. lat. ; considerably more than one half of which is below Red river. Nothing can be more vague than an attempt to calculate the mean depth of the Mississippi ; so much variation arises from the ever-varying height of the water, from projecting sand banks, from islands, and other localities. The breadth is equally variable as is the depth, but can easier be reduced to a medium. One observation may be made here, that will apply to most rivers ; that is, the over-calculation that is generally made of their width. From careful triangular measurement of the Mississippi, made at Natchez, at the efflux of the Atchafalaya, the efflux of Plaquemine, and near to the efflux of the Lafourche, at New Orleans, Fort St. Philips, and at the Balize ; the medial width is found to be short of half a mile, or 880 yards. When not inflated by islands, it seldom exceeds more than thirty-five of Gunter's chains, or seven hundred and seventy yards ; it is probable that if the numerous islands were estimated, the mean breadth might be established at one thousand yards, without any very material error ; but those islands only dividing, and not augmenting the water, eight hundred yards may be safely assumed as the width of the cubic column of that element, contained between the banks of the Mississippi. The velocity of the stream, has also been extremely exaggerated ;

it is a well ascertained fact, that a common flat boat, floating only during the day, (say one half of the time) will reach New Orleans from the mouth of the Ohio, many days before the apex of the high flood. The rapidity of the middle current has given rise to very erroneous calculations, as it respects the motion of the whole mass. Much delay is caused by the friction on the banks, from counter currents, and from the islands checking the waters below their points, that perhaps one mile an hour is a high calculation for the surcharge of the Mississippi. A transversal section of the river is not a semi-elipsis, but approaches that geometrical figure, near enough to permit its use in estimating the cubic quantity of water contained in any given length. The opposing ordinates will not be of equal height, but as the figure becomes inverted in every bend, the elliptical area will advance towards the truth to a very near degree of approximation.

From these premises, we may imagine a semi-elipsis, whose longitudinal diameter represents the rivers breadth, and whose longest ordinate, its depth; allow one hundred and fifty feet, as the length of the ordinate line, or depth of water at the greatest elevation, and twenty-four hundred feet as the extent of the elliptical diameter, or river's breadth, we are confident that these constituent principles will give a very correct result. From the application of the above elements 141,372 cubic feet would be contained within one foot, longitudinal section, of the river. At the rate of one mile an hour, 5,280 feet in length,

would be discharged every hour, or 746,444,160 cubic feet, of the entire mass.* If the water at different stages of elevation is considered as super incumbent strata, every single stratum will move with nearly uniform motion, the friction of the super stratum having exactly the same tendency to retard its own motion, as to accelerate the one next below.

The exposition of this simple hydraulic principle, will demonstrate the falsity of the idea, that the whole mass of water in the river moves with more velocity at different degrees of height. Though from the pressure of the accumulating particles from above, the super stratum gains more and more inclination on the plane of acceleration, yet the incumbent strata preserving the same inclination, with little variation, must move equal distances, in equal times, throughout the year, very nearly. When the river commences to fall, the superficies continually losing inclination, the upper column moves more slowly in proportion to its approach to a level with the curve of the sphere, upon which it flows.

From the above premises, the mean motion of all rivers, departs but little from the extremes. We will now proceed to apply the principles laid down, to their use in improvements made; or that may be made, to render the bank of the Mississippi, an agreeable, safe, and profitable residence. At the first epocha of the settlements on Mississippi, no method appeared obvious, or indeed practicable, but to raise

* Equal to 4,573,938,000 gallons.

an embankment, or levée of earth in front of every plantation. Those levées, by stopping the overflow, reclaimed a small portion of the bank. By extending the levée, every place may be made cultivatable, where the inclination of the earth's surface, prevents the water from reflowing from behind. But the system of levées possesses a retro-active effect. The confined body of water increased in height, and by its natural impression, every moment making an effort to break through, occasions annually, serious injury to the planters on the coasts, both above and below New Orleans. Nothing is more dreaded by the inhabitants than those fissures, or as they are aptly termed, *Crevases*; yet from the natural carelessness of the human species, no sooner does the flood subside, than the danger, and all serious reflections on the means to prevent its recurrence subsides also.

During the great floods of 1811, and 1813, much damage was done by the water rushing through the rents in the levée. Hitherto the only means to reclaim the lands adjacent to the river, has been by levées, or to remedy any casual accident accruing to those levées, has been to increase and strengthen them, which is one of the primary causes of the excess of the flood. Any person who, from a long and careful attention to the subject, and who possesses a good map of the Mississippi, and contiguous rivers, and lakes, must be convinced that levées are inferior in efficacy to artificial sluices, that would convey the surplus water in one or two bodies to the sea, by any other route than the river. To explain this subject clearly, it will be necessary to review the different

outlets from, and approximations of water courses to the Mississippi, from the efflux of Iberville to the gulph of Mexico.

The real nature of the efflux of the Atchafalaya, from the Mississippi, and the features of that remarkable place, have been noticed. The erroneous idea that the raft in the Atchafalaya impedes the issue of water from the Mississippi, has been examined and refuted. But this question has never been canvassed, whether any works made on or near the Atchafalaya, would tend to draw into that stream an additional column of water, of magnitude sufficient to make a beneficial diminution of the body annually passing through the Mississippi. If it was practicable to divert into the Atchafalaya any much greater quantity of water than what enters that river in the highest floods, so much damage would certainly be done to the inhabitants of Opelousas, but more especially those of Attacapas, residing in prairie grand Chevreuil, as to render such project inapplicable. It would be ruining one part of the community, to benefit another. Throughout the extent of annually overflowed lands, near the Atchafalaya, is interrupted by so many strips of high land, that are never, or but seldom overflowed, so as to render the distances between them, at high water, so many actual bays, of from one to six feet in depth in any common annual floods. In 1813, when Point Coupée Levée was broken, the water rose four or five feet above any elevation it had attained since 1780. During the month of June of that year, which is ordinarily the season of greatest rise,

the level of the general body of water, from the efflux of Atchafalaya, could not have augmented in height, more than four feet, without having thrown the water of the inundation into the Teche, in almost its whole length, above the town of St. Martin.

From the efflux, to the mouth of Atchafalaya, there is but one place, where that river approaches very near the Mississippi. It has been remarked, that from the Cow island to the mouth of Plaquemines, the course of the Atchafalaya is east. It is only seven miles in a direct line, from where the Plaquemine leaves the Mississippi, to its discharge into Atchafalaya.

Here from the near approach of the latter to Mississippi, is one point, where a considerable body of water could be drawn from that river, without any very extraordinary expense. In autumn, when the waters are low, the tide reaches up the Atchafalaya, and Plaquemines to Blakes, within five miles of the Mississippi. This fact proves that there is as much depression of surface in the short distance, from the efflux of Plaquemines, out of the Mississippi, to its discharge into Atchafalaya, as there exists from the former point, to the common level of the gulph of Mexico, or more concisely, the Plaquemines, in its comparative length of seven miles, has nearly the same perpendicular fall, as its parent stream, in a direct distance of one hundred and seventy miles.

It will be seen from the preceding, how much facility is afforded to aid artificial drains, by the great

descent of the plane, in a short distance, superadded to the beneficial diminution of the volume of the Mississippi, would be the incalculable amelioration of the navigation of the Plaquemines were its channel made wider, and deeper. The surplus water discharged at this place, would not in spreading over the islands towards the mouth of the Teche, produce the same ruinous consequences, as would a much less quantity, if drawn from the Mississippi by the Atchafalaya. It has been shown, that all the distance between the high land of Teche, and that of Lafourche river, is annually overflowed. A receptacle is offered to all the water, that does naturally, or that can, by human means be abstracted, from the Mississippi by the Plaquemine.

The Iberville, or Manchac, is another discharge of the Mississippi, which admits indefinite improvement. It is fifteen miles in a direct line, from the Mississippi, to the junction of the Manchac with the Amite river. The united stream presents a fine body of water, admitting vessels of six feet draught. The tide flows up the Manchac, to the mouth of Ward's creek, within nine miles of the Mississippi.

It is a singular, and curious circumstance, that the tide in Manchac and Plaquemine, flows within fifteen miles of actual contact; upwards of two hundred miles following the stream, above the mouth of the Mississippi.

Galveston stands upon the right bank of the Amite,

at its junction with the Manchac. The ground is sufficiently elevated to admit the building of a city, without any artificial accretion of soil. Was the bed of the Manchac made sufficiently deep and wide, to admit uninterrupted navigation; the advantages that would accrue to the commerce of Louisiana, would be certainly immense. The point of contact between boat and ship navigation, would be removed much farther into the interior of the country. A route would be opened for the direct introduction of the produce of the regions upon the northern waters of Ohio and Mississippi, into the fine settlements of west Florida.

No great diminution of the waters of Mississippi, could be made by the Manchac, without producing a reflux mass of water, that would materially injure the plantations upon the Mississippi, between St. Gabriel church, and Bonnet Quarré.

It may be observed, that there are too evils, arising from surplus water to be remedied on the Mississippi; one, the incumbent waters in the river, the other the reflux from the swamps. It is in most instances very difficult to remove one inconvenience, without producing the opposite.

It may be assumed as a postulatam, that no useful purpose, as it respects the consequences of overflow, can be ever answered by drawing part of the waters of the Mississippi into new channels, unless a reservoir into which the surcharge can be thrown,

exists within a few miles of the main stream.* This advantage is only offered by the Plaquemine, on the left bank of the Mississippi. On the right shore, Bonnet Quarré Point, is the first place, where a contiguous deposit for the water approaches sufficiently near the Mississippi. A moments inspection of the map, will at once determine this place, to be without comparison, the most eligible for the creation of a large channel of conveyance, for the superabundant water, that every summer injure, more or less, the

* No correct judgment can be formed upon the best means of obviating the inconveniences of the inundation of the Mississippi, without having determinate ideas, upon the real motion of water. That the rapidity of the mass of water in the Mississippi, is usually overrated, has been shewn; but not only the body of the fluid in the river, has been supposed to move more rapidly than it does in fact; the current itself proceeds a much less distance in a given time, than is commonly thought. The following, taken from actual measurement, will illustrate the soundness of the conclusions formed in the text.

From the falls of Niagara, to Lewistown, is seven miles, following the stream; about five and a half miles in a direct line. In this distance the water falls 104 feet; *and from very careful admeasurement and observation, runs within a small fraction of four miles an hour.*

The given fall in the above distance is very much greater, than the depression of the plane upon which the Mississippi flows. If the motion of the great mass of water, was as great as commonly thought, no inundation would succeed, the fluid must reach the gulph too soon to admit accumulation. When the water flows from the main stream and meets with no place of deposit like lake Ponchartrain, lake Borgne, or the Atchafalaya, it quickly rests on the back lands; and finally produces a reflux towards the river.

Water would be reduced to foam, by having fall enough to produce but very little more acceleration, than is allowed to streams moving upon planes having very slight inclination, such as the Mississippi and Atchafalaya.

inhabitants of Louisiana, seated upon the Mississippi, between Manchac, and the English Turn.

Like the descent at Plaquemine, there must be the same fall, from low water mark at Bonnet Quarré, to the level of lake Ponchartrain, that there is from the former place, to the mouth of the Mississippi. The actual distance from the Bonnet Quarré, to Point Pontchartrain, is less than five miles. If a large canal of communication was cut, there is no doubt, but that an immense quantity of water would be drawn from the Mississippi. Finding an immediate deposit where the decumbent mass could expand, none or very little accumulation of water could take place, in the intermediate space between Pontchartrain and the banks of the Mississippi, in the parishes of St. Bernard and Orleans.

How much a canal from Bonnet Quarré, to lake Ponchartrain, would benefit the people of Louisiana in their commercial pursuits, is very difficult to determine. There is no doubt, however, but that a very great part of the waters of the spring floods, could be diverted from the Mississippi at this place. The real expense attending the necessary works, would no doubt fall far short, of the never ending expenditure of the levées; and have the advantage of superinducing much greater safety to the crops.

Some persons have contended, that if an open sluice of water was opened from the Bonnet Quarré, or any similar place, that the entire body of the

river would, from the rapid descent of the plane, turn into the new channel. Such suggestions, though plausible, are unfounded.

From actual and careful admeasurement, the depth of the Mississippi, at Mr. Bringiers, nine miles below the efflux of the Fourche, was from the extreme high bank of the river, one hundred and fifty-three feet. The depth of Ponchartrain is about eighteen or twenty feet; never much less or more. The difference between the maximum and minimum elevation at Mr. Bringier's is twenty-three feet. The difference between the common level of Ponchartrain, and the low water level of the Mississippi, is about eight or ten feet. From those elements it results, that if we subtract twenty-three, from one hundred and fifty-three, we have one hundred and thirty feet, as the depth of the Mississippi. If we add ten feet, the perpendicular fall from low water level in the river, to eighteen feet, the common depth of the lake, and take the sum, twenty-eight, from one hundred and thirty, the remainder, one hundred and two feet, is the least depth of the bottom of the Mississippi, below that of lake Pontchartrain.

The reason why the narrow necks, in the bends of the Mississippi, are so often and easily cut by the incumbent water, is, that they are mere walls of sand and earth, which, when broken down, the water finds its usual capacious channel.

The bed of the Mississippi, like that of all other

rivers, is the deepest valley in the country through which it flows.* Nothing can have less foundation, on principles of sound philosophy, than the common notion of the liability of the Mississippi to desert its channel. There exists no data in the country to substantiate this opinion. Grand lake, lake Providence, lake St. Joseph, lake St. John, and lake Concordia, and Fause Riviere, on the right bank; and the Yazoo and Homochitlo lakes on the east, were all, no doubt, once part of the Mississippi bed. Those lakes are similar to each other, and differ intirely in their appearance and nature from all other lakes in the delta of the Mississippi.

If this great river had at any time flowed in any other route than the present, monuments would remain to attest the fact. The natural process of the Mississippi is to protrude the lands near its outlet. There are good reasons to believe that this protrusion is still in slow operation.

All observations made, respecting a canal from Bonnet Quarré, will equally apply to one, if made from general Villaret's or Jumonville's plantations, below New Orleans, into lake Borgne, by Bayou Bienvenu. Similar improvements may also be made from the Mississippi, into Black lake, at the mouth of the river Aux Chénes; and at the prairie Aux Moucles ;

* Mr. Schultz, in his travels, makes a similar remark respecting the Mississippi. Most writers on Louisiana being better acquainted with the surface, than the bottom of this subject, have drawn contrary conclusions.

but below the English Turn, neither commercial facility, or diminution of overflow, would result so extensively from canals as above the latter place.

Perhaps, in fact, no situation on the Mississippi could be more beneficially improved, than the space between Villaret's, and lake Borgne. This place has been rendered remarkable by the advance towards New Orleans, of the British army in December 1815.

Those general remarks upon the Mississippi might be much dilated; but we trust enough has been said to give a correct idea of the country adjacent to the bank, and included in the delta of this noble river.

We will now review another and important subject; the agriculture of not only the banks of the Mississippi, but collectively of all the state of Louisiana. The information given on this head, is in part from actual experience, and all from personal observation. Something may be omitted, that would interest the reader; but we trust that nothing is presented that can mislead. One object has been kept in view by the writer;—to avoid inflated accounts that could engender hopes of premature gain. In delineating the great permanent objects of nature, an effort has been made to render the descriptions true, and lasting as the objects themselves. In detailing the advantages or disadvantages attending settlement in Louisiana, the contrast has been made without individual prejudice. How far the writer's views have been transfused into his work, the public will decide.

Amongst the objects of culture in the state of Louisiana, maize or Indian corn deserves the first place. Maize is cultivated in every variety of soil in the state, the quantity produced from a given surface of land varies extremely. In new and rich bottom, or alluvial lands, often twenty barrels or sixty bushels have been procured from a square acre, but this produce is beyond the common standard, even on the best soil. On second rate lands in the northern parts of the state; remote from rivers of large size, an average of fifteen or twenty bushels to an acre, may be considered a good crop. But few spots that can be cultivated, but will produce maize. Perhaps this excellent graminæ will come to perfection on greater variety of soil, than any other that has been brought into use for purposes of nourishment. The time necessary to bring maize to maturity, is less than that requisite for any other species of grain. The range of the Indian corn is more extensive in America, than any other culmiferous plant yet cultivated. From the plains of the Rio de la Plata, to the Canadian lakes, maize is the principal nourishment of the human species, and the greatest part of the animals that man has made subservient to his use.

No scale to estimate the real value of the labour of human beings can be so certain, as the price of that produce reared by their hands for their own support. The quantity of Indian corn, that in common years, and on land of middling quality, that one man can produce, will not much vary from twenty bushels;

which at one dollar per bushel, the ordinary price, gives two hundred dollars worth of nourishment, from the labour of one man. The time of the year that labour can be expended on maize does not exceed four months, or one third part of the season; maize is usually planted in the state of Louisiana in March, April, May, and even in June. The time of harvest varies accordingly, through the months of August, September, October, and November. Though one dollar per bushel* has been marked as the medium price, yet its value must be liable to fluctuation from revolutions that may take place in other staple commodities. When sugar, cotton, indigo, and tobacco bear a high price, or when the hopes of the farmer are inflated respecting those articles, the culture of maize will be neglected; dependence being placed for supplies from Tennessee, Kentucky, Ohio, and other places. When, as has more than once been the case, in the last twenty years, that no staple would promise a rich return to the farmer, the above articles usually more valuable in a commercial sense, were neglected; the necessaries of existence were more attended to; and maize, as a marketable commodity, of course sold at a lower price.†

* When mentioning the bushel as a measure of capacity, it is used from the knowledge that most persons who will probably read this work, use the bushel; though it has never been introduced into the state of Louisiana. Speaking of maize, or any other gramineous seed, measured by the bushel, the pure matter, freed from the pellicle or shell, is to be understood.

† All vegetable and animal substances have two values, that differ essentially from each other. The first and most settled value of any edible substance, is the part *that* substance performs in the nourishment

In support of life, in the state of Louisiana, rice stands next to maize, though neither the actual, or even probable extent of the culture of the former grain,

of life. Singular as it may be, this real value of all vegetable and animal matter, that is appropriated to support existence, has been neglected in most estimates respecting domestic economy, whilst the varying market price, has been dwelt upon with more than painful scrupulosity. From a real neglect of this difference, the most serious evils have been felt. When cotton will give a return of twenty, or twenty-five dollars per cwt. in the bale, and sugar or other staples in proportion, the purchase of the farinaceous substances, will not be severely felt: but when cotton or other staples are below the one-fourth part of the foregoing price, the evil becomes apparent, not rearing gramina sufficient to support animal life on a farm. It is worthy of remark, how regularly plenty and scarcity produce each other. When maize is neglected in the state of Louisiana, it then becomes the interest of the farmer, in Tennessee, Kentucky, and elsewhere, to cultivate that ground in abundance. An enormous difference in favour of the culture of edible vegetables, or rearing of animals, as objects of commerce over other substances, is, that revolutions in the world, that often suddenly close the channels of exchange, can never inflict real distress upon a people, by forcing them to retain a surplus of provisions. This truth, though obvious, when once presented to the mind, has nevertheless too often escaped observation. Famine may rage with all its fury around magazines of cotton, indigo, or tobacco; but can never exist near a barn, replenished with maize, wheat, or rice.

Estimating the quantity of vegetable matter necessary to support animal life on his farm, every prudent, or indeed humane farmer, will first attend to its production, before that of any other substance, however exorbitant may be their price in market. The real price of maize, following this rule, can never differ in the hands of the cultivator; until he produces a quantity beyond the consumption of his estate. This surplus will then assume the nature of any other staple, and be liable to the same charges that regulate the prices of all other things of a similar description.

All emigrants should on their first removal to the state of Louisiana, attend to the production of gramina before staples of any kind. Dear purchased experience has taught too many, the difference between the real and nominal value of all culinary substances.

equals that of the latter. It is only near rivers, or where the surface can be laid under water that rice can be cultivated to advantage. Near the Mississippi, and on many of the secondary streams, rice can be produced in abundance. Though this grain can be cultivated in fewer places than maize, the quantity from a given surface is less. Fifteen barrels, might perhaps be a liberal estimate of the produce, in common seasons, from an acre of rice. The real value of rice, as an article of consumption by the persons who cultivate it, does not greatly differ from maize, though the nominal price, as marketable commodities differ greatly. When maize is at one dollar per bushel, rice will be twice that sum, upon the same quantity. This difference arises from the expense in cultivating rice; and in cleansing it from the husk.*

In all places where the two gramina; maize and rice, can be produced, a kind of vegetable competition will exist. From the great facility of its culture, from its instantaneous use almost as soon as formed, from the great ease with which it can be distributed to every living being whose food it may compose, either the whole or part; maize must ever be the chief object of the farmer residing on lands, and in a climate congenial to its growth. Rice, though extremely nutritive, indeed exceeding an equal volume of maize, will be cultivated in Louisiana, rather as a staple, than as

* Humboldt remarks, that the cultivation of rice is neglected in the Mexican provinces, and assigns the difficulty of watering the lands as the reason of that neglect.—*Paris Edition, vol. iii. p. 135. Political Essay on New Spain.*

the stamina of life on the farms where it is produced. Rice possesses the general advantage that has been remarked as attending all cerealia as staple commodities; that of preserving plenty amid fluctuations of trade. Unedible produce may, and often does, aggravate the distress that attends mutations in commerce; by the view of useless wealth. A wise legislation will ever lend its utmost encouragement to the production of the necessaries of life, and always favor a staple, that will tend to preserve the hand that gives it existence.

One advantage, however, in the culture of rice, arises from the possibility of raising it on grounds, too low and moist for any other species of valuable vegetable. This advantage will be more felt and appreciated, when, by the increase of population, land will become very valuable, from its surface, rather than from its situation. Spots may be made the residence of human life, by the planting of rice, that would otherwise be uninhabitable. In the basin of the Mississippi, where rice and sugar can also be cultivated with maize, that tract must claim a preference over all other parts of the state; a preference in its real comparative value.

A general idea prevails, that "rice contains much alimentary substance in a small volume."* In estimating the nutritive substance of any given body, nature seems to have founded the data from which the

* Humboldt.

valuation must be made, rather upon the weight, than space occupied, and rather upon the laws of gravitation than those of extension. Upon these principles, the barrel of clean rice, which weighs but two hundred pounds, would possess nearly the same value in nutritive substance as a barrel of wheat flour, which weighs nearly equal. Experience has shewn, that between the two last mentioned substances, no very great difference exists in their benefits, when used as animal food. The barrel of maize flour, more porous, weighs less than that of either rice or wheat, and yields less sustenance to animals; but when estimated agreeable to respective weight, yields to neither in its beneficial principles of nutrition. Experienced farmers in Louisiana, who have cultivated maize and rice, concur in estimating the former over the latter, in the surplus that human labor can produce, above the quantity necessary for its own support: and was the demand for maize as a staple, equal to the demand for rice, the culture of the former would be preferred to the latter; maugre all the difference that might exist in their respective prices.

The merits of those two vegetables substances may be summed up in few words, agreeable to existing circumstances. When cultivated for their real value, maize will be preferred,* but as a staple rice.

* From its almost universal adoption by new settlers, in the first instance of their establishment, in all parts of the southern and western states, there seems to be a general and tacit preference given to maize. Men, in recent establishments, are in most instances pressed for food; and will place their attention on that vegetable, that from the least labor, will in the shortest time, yield support to animal life.

The long unsettled problem, "What grain, or rather, what vegetable will support most human beings upon an equal surface?" has generally been answered, especially if the people in question was between the tropic of Cancer, and 35° N. lat. in favor of rice.* The

We hesitate not to say, that below 38° N. lat. to the Mexican gulph, in situations not elevated more than 1000 feet above the level of the ocean, maize will yield more nutrition from the same labor, than any vegetable yet cultivated in that range.

The thirty-fifth degree of N. lat. seems to be the climate in the United States most salutary to maize; but its vegetable life is vigorous far north of that parallel, and flourishes south of it to the gulph. Though more productive in Tennessee, and even in Kentucky than in Louisiana; yet the greater length of summer, in the latter country, compensates for the difference in produce, by prolonging the time of planting.

In Louisiana, and the Mississippi territory, on all lands from the alluvion that is above common overflow, to the highest hills, maize is cultivated. The produce greatly varies, on different soils, and in different seasons; but every where, and at all times, it is the crop that soonest and most extensively rewards the cultivator.

In vegetable association, the *Cornus Florida*, the common dogwood, is the native tree of this continent, most analogous in the lands upon which it grows spontaneously, and is resident to the maize. In all the wide range of the two America's, wherever the *Cornus Florida* is found, the maize can be cultivated. The flowering season of the cornus is a signal for planting the maize, and the fruit of the maize comes to maturity, nearly at the same time with that of the cornus, if planted at the flowering time of the latter. It scarce needs any other proof to determine whether any given place is suitable to the growth of maize, than to establish the fact, that the *Cornus Florida* is found in the forests. Of other trees that grow upon lands in North America, most congenial to maize, the most remarkable is the *liriodendrum tulipifera*, *juglans nigra*, *acer saccharinum*, *gleditsia triacanthos*, *quercus tinctoria*, *tilia pubescens*, and the *celtis crassifolia*.

* Humboldt is of opinion, that an equal surface, cultivated in rice, will yield to animals more support than the same extent of wheat.

"Il ne paroît pas douteux qu'un terrain cultivé en riz; nourrit un plus grand nombre de familles, que la même étendue cultivé en froment."

Essai Politiques sur le Royaume de la Nouvelle Espagne.

solution of this problem can only become deeply interesting, when the population of any country is excessive. Another question in rural œconomy must prelude an enquiry into the facility of producing and habituating animal life, viz. what vegetable will yield most nutrition from the same labor. Where immense spaces of land lies uncultivated, as is emphatically the case in the state of Louisiana, the value of culinary substances must be drawn from human labor. Where great multitudes are confined to a small surface, vegetables ought to be preferred, that from a narrow space give much nutritive produce.

Wheat may be named as one of the vegetables cultivated in the state of Louisiana, rather from what may be, than what has been done. Though some wheat of good quality has been raised in almost every part of the country, it has never yet been brought into general culture. Near the banks of the Mississippi, and some other rivers, where the flour of the north western states, can be exchanged for the richer commodities of the southern; or where those commodities will give a high price, wheat will never be an object of agricultural œconomy. But remote from the Mississippi and Gulph of Mexico, in places where neither the soil or climate will admit the growth of sugar cane, rice, or even abundant crops of cotton, wheat will be raised, for its real value, as an article of food for the use of the cultivators. The flour made above 35° N. lat. will ever supersede that substance made below that parallel, as a staple commodity in the valley of the Mississippi.

Rye, oats, barley, and indeed all cerealia, except rice, may be classed as respects their locality with wheat; like wheat they have been hitherto neglected. Clover, and all grasses, capable to be made into hay, have been overlooked. Perhaps few countries on the globe would admit a greater variety of meadow grasses, than Louisiana, this invaluable part of agriculture, has not been attended to with any care proportionate to its importance.

Almost all the esculent roots of America, may be enumerated amongst those that are, or may be cultivated in Louisiana; but the principal place is due to the potatoe. The root known amongst the French inhabitants, by the name of "Patates Douce," literally, sweet potatoe, a species of bulbous rooted convolvulus,* grows in excessive abundance, and upon a greater variety of land, than even maize itself. This excellent root at the present, and at all future periods, must rank amongst the most valuable vegetables. In the English language, two plants, very different in family descent, have been confounded by one generic name; and distinguished by adjectives prefixed to the general term. The Irish potatoe, (a species of solanum,) and the sweet potatoe.† However different

* *Convolvulus Batatas* Muhlenberg.

† Amongst the great number of useful productions, that the migrations of nations and navigations the most distant, have brought to our knowledge, no plant since the discovery of the cerealia; that is to say, from time immemorial, has had such marked influence on the well-being of man, as the potatoe.

those two vegetables are in their taste, or botanic distinction, they contend with almost equal pretension, for pre-eminence as human food.

The Irish potatoe, from what reason we know not, has never yet been extensively cultivated in the state of Louisiana, perhaps this neglect may arise from the great facility of rearing its more tropical rival, the sweet potatoe. In the Mississippi territory, and in many parts of Louisiana, where we have seen the Irish potatoe produced from culture, the fruit was as large, but generally less farinaceous, than that reared in the north western states.

On the banks of bayou Boeuf, on red loam, similar to the banks of Red river, and on new land, the Irish potatoe has been produced, as large, savoury, and free from water, as any of the same species, reared in any part of the United States. No doubt but this plant may be produced in abundance, on land naturally covered with oak, and hickory timber;* this kind of land is common north of 31° N. lat. and in some parts of West Florida. It would be useless to enumerate the garden vegetables, brought to perfec-

Its culture extends from the extremity of Africa, to Labrador, into Iceland, and Lapland. It is an interesting spectacle to see a plant, descending from mountains placed under the equator, advance itself towards the pole, and resist more than the cereal grainina, all the frosts of the north.—*Humboldt Essai Politique sur la Nouvelle Espagne, vol. iii. p. 124.*

* That species of oak designated by botanists *Quercus Tinctoria*, and that species of hickory vulgarly called pignut, *Juglans Porcina*.

tion within the state of Louisiana, and the adjacent countries; as such a list would in most part be an enumeration of the well known plants that are the objects of horticulture throughout the southern, and many that are raised in the most northern states of the American Union. Gardening, as an elegant art, has yet been little attended to in the delta of the Mississippi; though few places from the mildness of the climate, and richness of the soil, are more favorable to that useful and pleasing branch of agriculture.

Several species of fig tree, has been introduced and produces abundantly. In the market of New Orleans, three or four kinds of very excellent figs are exposed for sale. The large purple fig is the most delicious, but also the most delicate species of that fruit yet introduced. The tree will not resist the frosts of winter far above lat. 30° N. and is often killed below that parallel.

The yellow fig, transplanted from the south of France is the species most generally reared on the Mississippi. This tree is found as far north as 33° , and no doubt might be introduced still higher. It is common over the whole state of Louisiana, and Mississippi territory, wherever the whites have made settlements, and excepting the peach, is the most general fruit found cultivated in those places.

The peach* has been introduced into Louisiana,

* *Amygdalus Persica*. This tree has been introduced into Europe, and thence to America, from the south of Persia. In Europe and the

and is the only fruit tree that the Indian tribes on the southern waters of the Mississippi, have domesticated. No Indian village, of any permanence, that we have seen, but what has the peach tree growing amongst the cabins. Accident, rather than design, seems in most cases, however, to have made the peach tree common in the Indian villages; by throwing the stone of the fruit, carried from the white farms, upon the ground near their cabins. The extreme facility with which this tree vegetates, has given the savages a fruit, that would never have become a part of their domestic luxury, from their own foresight and industry. Seventy or eighty miles from the white settlement on Bayou Pierre, (of Red river,) within four or five miles from the Sabine, in an old abandoned village of the Yatassé nation, we found the peach tree scattered amongst the ruined cabins, in the same wild confusion that we had seen that tree overshadowing the dwellings of savages elsewhere.

The peach tree below 33° of N. lat. approaching its native climate, becomes in some measure an evergreen, bearing, in many seasons, either fruit or flowers throughout the year. Like the fig, the peach suffers from the showers that almost uniformly fall along the Mississippi in July and August. This periodical showery season happening when both those fruits are ripe, injures their quality, and by preventing in a great measure the inhabitants from drying them in the sun, decreases their beneficial uses to man.

northern parts of the United States, it is a deciduous tree; but cannot be considered completely so in Louisiana, as the old leaves in part remain upon the tree until replaced by the new.

The apple, though cultivated, and often of excellent quality, seems to be an exotic in southern Louisiana. Some fine orchards exist, but the tree languishes under a too tropical sun. Perhaps the high dry tracts on the hills of Derbane, Black lake, and Bistineau, may, when peopled, be found more congenial in clime and soil to the apple, than the more southern delta of Red and Mississippi rivers.

The peach blossom is often killed in every part of Louisiana by frosts in spring; but the apple blooms too late to be often destroyed by those tardy, unseasonable storms.

That the olive has never yet been brought into general use in southern Louisiana, excites astonishment. This noble tree, that from time immemorial has been the emblem of peace and plenty. The olive, is perhaps, the first fruit tree, that the human species, in times the most remote, made an object of their care. The olive, is of all fruits, that one whose uses are most numerous and salutary. This tree, over an immense range of the eastern continent, has been from the earliest times considered like the cereal gramina, indispensably necessary to human society. Yet this benefaction of Heaven has been in great part denied to America, from the carelessness of some, and the national avidity of others, amongst the different people, who have planted colonies on this continent.*

* The great analogy between the climate of the Plateau of New Spain, with that of Italy, Greece, and southern France, should invite the Mexi-

The sweet orange* grows in great abundance in all the range of Louisiana, below 30° N. lat. but above that parallel, it can seldom escape frost long enough to come to maturity. The citron, lemon, lime, and other fruits of the same family with the orange, are influenced by the climate in nearly the same degree. Until a botanical garden is established, it will in fact be difficult to determine how far many fruits and plants may be naturalized. †

cans to the culture of the olive. This culture has been attempted with success, from the commencement of the conquest; but the government, by an unjust political system, far from encouraging, have sought to prevent it indirectly. There are not, that I know, any formal prohibition, but the colonists have not risqued a serious attention to a branch of national industry, that would have instantly excited the jealousy of the mother country.

Humboldt Essai Pol. S. N. E. Vol. III. p. 149.

* *Citrus aurantium.*

† Mr. John Vaughan, of Philadelphia, informed the author, that the bignonia catalpa when first introduced into the squares and gardens of that city, was with difficulty preserved from the frost. This tree is now so far naturalized, as to withstand the rigors of the severest winter. One growing in the State House Yard is six feet eleven inches in girth; or upwards of two feet diameter. The tree is plentiful through the city and environs, vegetating as if in its native climate.

The melia azedarach, or pride of India, now so common in Louisiana, is becoming evidently more hardy. This is perhaps the most beautiful, ornamental tree on this globe. Its growth is extremely rapid. Its fructification more abundant, and after planting, demands less care than any other exotic tree yet introduced into the United States.

The wood of both the bignonia catalpa, and melia azedarach, is excellent for many uses, and especially the former; withstands the action of air and moisture longer than that of the cypress, (*cupressus disticha*,) red cedar, (*juniperus Virginiana*,) or even the black locust, (*robinia pseud acacia*.)

The cherry tree, (*prunus cerasus*,) has been planted upon the Mississippi; but does not bear fruit abundantly, even upon the high hills of the Mississippi territory. The cherry tree, affords another, to the many existing proofs of the fact; that fruit bearing trees may be reared in places where their produce will not reward the trouble of their culture. When any given vegetable has been introduced into any country, only one step is taken in the investigation of the subject of its beneficial cultivation.

Various species of the plumb grows in all parts of Louisiana in great abundance. This fruit is brought into the market of New Orleans in plenty.

The gooseberry and currant, like the cherry, seem to be out of their congenial soil and climate; vegetate with difficulty, and bear little fruit.

The various kinds of native vitis, (grape vines,) are vigorous in their growth over every part of Louisiana. The wild fruit of many species abound. The exotic species of the vitis, that have been introduced from the eastern continent, succeed well. From the mildness of the climate and the very great diversity of soil, no doubt but wine could be made in Louisiana to advantage. The cranberry, (*vaccinium macrocar-*

The author has often seen corner posts of plantations in Louisiana, of the wood of the bignonia catalpa, that had been planted upwards of thirty years, without exhibiting the least appearance of decomposition. In Opelousas and Attacapas its culture is now much attended to; but as a timber, might be still more usefully employed than hitherto.

pon,) is found native on the waters of the Mermentau; but has never attracted public attention. Many other kinds of vaccinium are found in different parts of Louisiana. No part, indeed, if the overflowed lands of the large rivers are excepted, but what produces the whortleberry. The most common species are, the *vaccinium arboreum*, chiefly west of the delta of the Mississippi, on thin level wood land. *Vaccinium resinum*, in the pine forests, both east and west of the Mississippi; and the *vaccinium stamineum*, in the same places with the *vaccinium resinum*. The other fruit trees, either native or exotic, are unimportant in a general view. Much will be done by time and an increased population, in this as in all other branches of agriculture.

A circumstance that has been overlooked, has contributed to retard the introduction of plants and fruits into Louisiana. Most of the valuable vegetables have been transplanted from the West India islands. It now remains no longer doubtful, but that the same laws of organization, that oppose the introduction of animals from one climate to another, impede vegetables also. If the orange tree of Spain or Sicily, and the sugar plant of the same places were introduced into Louisiana, the most beneficial consequences would no doubt result.

This sketch of the various plants that are or may be cultivated in southern Louisiana, though brief, will give a true, if not an extended idea of the facility with which the comforts of life can be procured by man in this region; as far as his food is concerned.

The sugar cane forming the great link, that unites the plants that are necessary to man's existence, with those that administer to his habits of luxury, is perhaps after the former the most valuable vegetable cultivated on the globe. Since the introduction of the sugar cane on the banks of the Mississippi, Lafourche, and Teche, its culture has continually increased. From the circumstances of the moment, great encouragement has been given to the sale of Louisiana sugars.

The importance of this branch of culture will warrant a more extensive detail, than would be justifiable upon other subjects of less consequence, or more generally known.

It has always been, and no doubt will long remain doubtful, how far north the sugar cane can be cultivated. Much depends upon soil, situation, water courses, and other local circumstances.

In the Louisianian almanac for 1813, was published, a letter from the author of those tracts on the subject of the cultivation of sugar cane in Louisiana. An opinion given in that letter, has been contested by many, that the existence of the sugar cane could not extend far north of the orange tree. How correctly this opinion is founded on fact, time must determine; but hitherto in all parts of the globe, those two vegetables have been found to submit to cold at nearly the same limit as at the present time. Lat. $30^{\circ} 20' N.$ may be drawn as the line of demarkation of the sugar plant; but how far the natural flexibility of vegetable life may

enable the cane to perfect itself in a shorter time, and of course escape the effects of early or late frosts, it is impossible now to determine.

Climate in attempering plants, hasten their approach to ripeness, rather than secure their juices from destruction by frost. This remark is exemplified in all the solanums (Irish potatoe), peppers and egg-fruit, whose leaves are easily killed by the slightest degree of freezing. The sugar cane may also, no doubt, be reared beyond where its juices will be in quantity sufficient to reward its cultivators.

The following line includes all the territorial surface upon which the sugar cane has yet been attempted in the state of Louisiana. Beginning at the Rigolôts, and through lakes Pontchartrain and Maura-pas, and up the Amite and Ibberville rivers, to the Mississippi; thence up the latter stream, including the settlements at Point Coupée, and Fause Riviere; thence west to Opelousas, and thence including only the Teche and Atchafalaya to their mouths, thence along the coast of the gulph of Mexico, to the place of beginning.

All other places in the state, where the sugar plant is found, it has been planted rather from curiosity than from views of utility, or from a wish to make essays upon the possibility of advantageously extending its culture.

The above designated tract extends over about

10,000 square miles, or 6,400,000 acres of land. All this expanse being alluvial; what surface can be reduced under culture will produce cane; but it is extremely difficult to determine the respective surface, that may be cultivated, from that of lakes, and irreclaimable swamps; that set man and his improvements at defiance.

The rivers, bayous, and lakes, are so mingled, intersect each other in such intricate mazes, that no absolute certainty can be attained; but we are confident, that on one-tenth sugar may be cultivated. This would give 640,000 acres without including the Vermilion lands, or the waters of Mermentau, and other streams, where the cane may no doubt be perfected. Perhaps in stating the sugar lands of the state of Louisiana at 1,000,000 of acres, no great error would be committed. This estimate exceeds the one-thirtieth part of the whole territorial surface of the state. Deducting from this area three-fourths, for all the other objects of agriculture, would leave a nett extent of 250,000 acres for the sugar plant. It may with safety be concluded, that long before the state of Louisiana is brought to the utmost point of cultivation, nearly the latter area will be appropriated to sugar.

Like all other crops, sugar varies extremely on different lands, and from local position; more than two thousand pounds, having been made from one acre on new sandy land; though this quantity is at least double the average produce. Intelligent men on the

Mississippi bank consider 1000 pounds, as a medium crop; but there are many reasons to think that quantity rather above the real weight that could be made per acre on the assumed extent. We have chosen eight hundred pounds as a prudent mean, that may be rather too low than too high an estimate.

It will however be found, that reducing the surface to 250,000 acres, and the annual produce to 800 pounds per acre; that two hundred millions of pounds weight of sugar may be made yearly in the state of Louisiana, without encroaching too largely upon other branches of agricultural economy. This calculation being on the most reduced scale, exhibits one of the many invaluable advantages resulting to the United States from possessing the delta of the Mississippi.*

* Whilst this work was in the hands of the printer, the following article made its appearance in Niles' Weekly Register. We have thought it necessary to insert it entire in a note; as the information contained is relevant to our subject. Respecting its production on Red river, and its exemption in those places from destruction by frost, we are inclined to give credence to the fact, from the known flexibility of vegetable life; though the lands in question are above the limit we have assigned in the text to sugar cane. With both the gentlemen whose names are mentioned, the author of this work is acquainted; and can vouch for the respectability of their characters.

Should the lands on Red river, as high as Natchitoches produce the sugar cane, those of Ouachitta, Tensaw river, Aux Boeuf, Sicily Island, Black river, Bayou Boeuf, Bayou Crocodile, Bayou Petite Prairie, Bayou Rouge, all the border of the Mississippi, as high as Natchez, all the lands of West Florida, included in the state of Louisiana, and all Opelousas where the soil will admit of that vegetable. Should the essay made by those gentlemen be verified by future experience, the sugar land will be more than quadrupled, or exceed one million of acres; which, at a reduced production of eight hundred pounds per acre, would yield eight hundred million pounds of sugar annually.

It will be seen by comparison, that the inhabitants of southern Louisiana have gained even more than the in-

We will only observe, that great caution ought to be used in publishing statements so much calculated to awaken individual avidity. No experiment ought to be implicitly received, or condemned.

“ THE CULTIVATION OF THE CANE. ”

“ *The Red River Lands.* ”

“ The editor of the Weekly Register has been favored with some information as to the progressive cultivation of the sugar cane in Louisiana, which he thinks cannot fail to interest all who delight to ascertain the resources and capacities of our country to supply the wants and gratify the wishes of its people. The march to independence is steady and certain—exterior circumstances have palsied the commercial spirit and checked the manufacturing zeal of our citizens; but the present depression of these is not more likely to last, than their former activity was to be expected to continue.—Each state grew out of *artificial* circumstances, produced by the condition of things in Europe, and must find their *natural* level.

“ I have several times made the “ round assertion,” as it may be considered, that the United States’ lands in this section of our country, if carefully managed, will, of themselves, produce an amount equal to that of the present national debt—for the public own vast tracts of country as well calculated as any in the world for cultivating the most advantageous products of the soil—*sugar* and *cotton*, at their present and probable future prices. I have been much pleased to feel assured that this result may be confidently expected. In a pecuniary point of view then, the purchase of the territory of *Louisiana* was a master stroke of policy—but its value in a political consideration is beyond estimation, being *immense*; as it must appear to every man on a moment’s reflection.

“ The certificates below, are those of two very respectable gentlemen living on the *Red River*, about three miles below the town of Natchitoches, which is in lat. 31° 46’ N. Our correspondent observes, that the experiments made by others are equally satisfactory, and that many of the most wealthy planters of that neighborhood were about to change their crops from cotton to sugar—adding, that although he believes no lands in the United States are equal to those of that river for the quantity of cotton they give the planter, yet that the cane will be found a more profitable crop, as being less liable to accident or disease, and requiring less labor to bring it into the market,—one acre in cane being also equal in value

habitants of the United States. The advantages accruing to the people of the United States is not in gaining su-

to at least three acres of cotton. He says, that about 200 acres of land on the *Red River* are this year planted with the cane, and he calculates that sugar will soon become the grand staple of the country, and greatly exceed the quantity that can be made on the *Mississippi*. For, he observes—"Our lands proper for sugar plantations, are very extensive; they are richer, the soil warmer, and the vegetation quicker than those of the *Mississippi*; our cane grows much faster in the months of May and June, than it does on that river, which is accounted for from the extreme coldness of the *Mississippi* water at that season, flowing directly from regions of ice and snow. This, it is thought, fully, if not more, than compensates for the difference of latitude."—*Editor.*

"The subscriber, planter at Natchitoches, in the state of Louisiana, certifies, that his experiments in the cultivation of the sugar cane, have produced him at the rate of 2,500 pounds of sugar of a very superior quality, per arpent. And that he is persuaded, if the cane be well cultivated, and carefully managed, that it will produce 3,000 pounds per arpent—first cut.

"Given under my hand this 29th Dec. 1815.

"T. BOSSIE."

Copy of a letter from Samuel Davenport, Esq. to Dr. John Sibley, on the subject of the cultivation of sugar cane, on Red River.

"DEAR SIR—From conversations I had with several of the most observant sugar planters near Orleans, as well as from my own observations, I was convinced that the sugar cane was not so tender a plant as it was thought to be, when first cultivated in Louisiana—that it naturalized itself to climate and certain qualities of soil with facility; and was induced to make trial of it on our Red river lands: consequently, in 1814, had three-fourths of an arpent of plants brought from the coast, which planted five arpents at four feet distance the rows. It grew luxuriantly, and ripened to a considerable height. In the fall, I had, as an essay, three-fourths of an arpent of ground, which produced me near 1000 wt. of good sugar; the balance I planted last spring, which gave about twenty arpents, eight of which I manufactured, and has produced me about 9,000 wt. of a superior quality, besides molasses, &c. although I lost considerable of juice and syrup from the imperfection of my machinery. I am encouraged to continue, and I think will be enabled to grind from thirty to forty arpents next season. The fertility and superior

gar cheaper, but merely having that valuable article within their own domain, of course their supplies not liable to the accidents of war with a foreign state; but the planters and land owners of the state has gained the advance upon their property, and the additional security for the culture of the most valuable vegetable that the climate of the United States will admit. As an entegral of the United States, Louisiana is the place only, where the sugar plant can be produced to advantage. Immersed in the Spanish dominions, the

quality of our soil, the local situation of our lands on the margin of the river, with the considerable exhalations which takes place during the fall season from its waters impregnated with saline particles, prevents the early frosts from affecting vegetation until much later than on the neighboring highlands, and convinces me, makes up amply for the difference of latitude between this and the coast above Orleans, where they succeeded in a very high degree in making sugar.

“ Upon the whole, I think we may safely calculate upon 1000 weight per arpent, one year with another, besides molasses, &c. Some objections are made to our prospects of success on the ground that the root will not produce a second and a third year, as on the coast of the Mississippi, on account of the hard frosts that prevail in winter. In fact, last season, but very few of mine survived the severe and uncommon winter we had; but I calculate much on their producing next season. Yet should we fail in our expectation from the stubble, the culture of the sugar cane will still be productive by planting our fall crop every year: for instance, one-fifth of the whole will plant the same ground, leaving four-fifths to grind and manufacture into sugar—the produce of which, as above stated, will be worth more than the whole planted in cotton, at the highest prices and most sanguine calculations. The sugar cane is much easier raised and prepared for market than the cotton crop, and requires less work than corn, while growing. Another season, I am confident, will fully determine our Red river planters in favor of the cultivation of sugar cane, and enhance much the value of lands in our parish.

“ I am, sir, very respectfully,

“ Your obedient, humble servant,

“ S. DAVENPORT.

“ *Natchitoches, Jan. 3, 1816.*”

inhabitants in the delta of the Mississippi would occupy a spot infinitely less favourable to sugar than Cuba, Porto Rico, the sea coast of the gulph of Mexico, from Vera Cruz to Guiana, together with immense other tracts in the almost unlimited domain of Spain in the two Americas.

It is apparent from Humboldt, and other writers, how extensively the sugar plant is now established in the Spanish territories, and when we glance an eye over the area upon which cane may be cultivated within the tropics, it demands no great political sagacity to discover, that its existence in the delta of the Mississippi is rather the effect of moral than physical causes. Those moral causes would have a reverse effect upon the administrators of the Spanish and American governments. In the calculations of the former, the encouragement to make sugar in their own department of the earth would operate with more benefit to Louisiana, as in that place alone, in the United States, can sugar in large quantities be produced—whereas the legislature of Spain would consider itself morally bound, to give equal facility to the inhabitants of regions more favoured by nature than Louisiana.

In placing the advantages of human labor, when employed in the production of a staple such as sugar or cotton, contrasted tables of the expense, time, and quantum of force, must give the clearest ideas to the mind. We have drawn the following comparative table of sugar, rice, indigo, cotton and tobacco; which in their turn have been, and may again be the staples of the state of Louisiana.

TABLE of the benefits resulting from fifty effective workmen on a Farm in Louisiana.

Staple.	Amount.	Price.	Nett Value.	Annual revenue from each hand employed.	Acres in cultivation.	The extent that may be found in the state of Louisiana, upon which each staple may be cultivated.	Remarks.
Sugar,	150,000 lbs.	8 cts. per lb.	\$12,000	\$240	150	0,250,000	From this estimate, if all the land in the state, upon which that article could be made, was cultivated in sugar, say 350,000 acres yielding 1,000 pounds per acre, at 8 cents per pound, would give 20,000,000 dollars.
Rice,	700 barrels,	\$6 per barrel	\$4,200	\$84	100	0,250,000	Rice demanding more labour to an equal surface, and producing more, if the rice lands were brought into culture, say 350,000 acres, which yielding 7 barrels per acre, at 6 dollars per barrel, would produce an annual revenue of 10,500,000 dollars.
Cotton,	60,000 lbs.	15 cts. per lb.	\$9,000	\$180	250	2,400,000	The cotton lands of the state of Louisiana, will average a produce of 240 pounds of clean cotton per acre: this would amount to 576,000,000 pounds, if all the cotton lands were brought into cultivation.—leaving a revenue of \$5,400,000 dollars.
Indigo,	7,000 lbs.	\$1 per lb.	\$7,000	\$140		2,000,000	
Tobacco,	60,000 lbs.	\$10 per cwt.	\$5,357 12 $\frac{1}{2}$	\$107+		1,500,000	

NOTE. The whole extent of the state of Louisiana, after deducting one-fifth for swamps, rivers, pine barrens, and other irreclaimable tracts, extends over 23,480,320 American acres. The space allowed for sugar has been descanted on, a round sum of 2,400,000 acres was assumed for cotton, amounting to little more than one-tenth of the whole surface. Indigo demanding a richer soil but a similar climate with cotton, 2,000,000 cannot greatly depart from the surface upon which that staple may be cultivated. Tobacco can be raised in all parts of the state, but the soil suitable to its growth does not differ widely from that necessary for sugar—a deep vegetable loam.

The molasses is omitted to be included with sugar, being left, as a set off against the incidental expense attending the latter. With this diminution, sugar, with all the other staples, may be taken agreeable to their comparative values in the table. Their respective expense will be found to preserve nearly the same medium with the price.

No subject has been more agitated, than the number of effective hands that can be most beneficially employed on one farm. We have chosen fifty as the basis of the foregoing table; as the most suitable number to estimate the value of human labor. From some experience in the culture of cotton, we have good reason to believe a decrement of profit will ensue, from employing more than thirty or forty hands, under the most skilful agriculturalist.

For reasons already stated, we have chosen human labor, rather than cultivated surface, as the data upon which the foregoing table is founded. It is also understood, that in addition to the efficient sums standing opposed to each staple, that the same persons cultivate also maize, and other vegetables sufficient for their own support. The result of the table gives the nett revenue arising from each article respectively. In addition to the certainty of sale, it is demonstrated that sugar is far the most profitable article in the estimate. The capital necessary to create a sugar estate, exceeds what would be necessary for any other agricultural establishment; but falls short of what is generally supposed. Forty thousand dollars

is an ample sum, to enable a planter to purchase slaves and land, sufficient for the employment of fifty hands, on a sugar estate ; as well as to erect all the necessary buildings.

Few have attempted sugar on a small scale ; but the correctness of the opinion may be doubted, that only very large capitals can be employed to advantage on a sugar farm. No good reason, except we admit custom as logic, can be given why ten, fifteen, or twenty men, may not make a proportionate quantity of sugar, as well as of cotton, rice, or maize.

From the annexed table it will be seen, that the comparative value of human labor when employed upon the two great staples of the state of Louisiana, sugar and cotton, is as three to four. From the greater extent, and variety of land suitable to the culture of cotton, a much greater general revenue may be drawn from it, than can be drawn from sugar.

When the state of Louisiana is brought into cultivation far from the ultimum, four hundred thousand laborers may be employed in making cotton, three hundred thousand on sugar, and one hundred thousand in the production of rice. This population of eight hundred thousand people, would yield above one hundred and thirty millions of dollars, at the most reduced prices of the different products. When the elements are examined separately, this rich reward to the industry of man, that is promised by southern Louisiana, will not appear delusive.

Whether in a moral point of view, the enormous mass of wealth, that will necessarily accumulate near the mouth of the Mississippi, will constitute a national benefit, or disadvantage, is a mere speculative inquiry, that education, caprice and other circumstances, or pre-conceived opinion, will influence men to answer differently. In presenting this sketch of a country whose importance is every moment developing, we have studied to strip the picture of false colouring. The estimates are founded in nature; and if erroneous, the proper correctives are always applicable.

In every part of the United States, the farmer, by placing his capital and revenue, as they now stand, in opposition to what they would produce, if removed into Louisiana, has the means to determine for, and against emigration. This work has not been written to answer any other purpose, than to exhibit a faithful delineation of an useful and interesting portion of the earth.

It has been shewn that, until the population of the state of Louisiana, exceeds eight hundred thousand effective persons employed in agriculture, that the annual reward of human labor must exceed one hundred and eighty dollars.

Little has been said respecting artisans of any kind—little need be said respecting a class of men, whose situation depends upon the advance or retardation of agriculture and commerce. Establish in any given place, the value of human labor in the production of

raw material, and the value of the same labor must in that place, be estimated by a scale commensurate with the price of the great staples.

When sugar, cotton, rice and indigo gives a high value in market, every hand will be employed in their production; except those necessary for the common arts of life; manufacture of farming tools, clothing, and building. Consequently, when agriculture and commerce flourish, all kinds of mechanical professions must be profitable.

It is a fact that admits no denial, that the individual in society, who depends upon his daily labor for support, however high may be the wages of his industry, encounters difficulties, unknown to agriculturalists or merchants. The mechanic labors for a stipulated sum, generally in money; which sum when gained, is usually applied to purchase the necessaries of life; those necessaries are continually changing in respect to their nominal price and real value, whilst labor, less flexible, remains stationary. Hence the slightest attention to the real history of man, will convince the least observing, that in times of public distress, the first and loudest clamors proceed from the mouth of artisans. This arises not from a more restless spirit inherent in such men, but from the real nature of their situation.

The merchant, whose gains are generally much greater than the mechanic, may have the mortification to behold what is called stagnation in business; but

his family cannot either starve or perish, for want of necessaries they actually possess. The planter may be unable to sell his staple; but his farm feeds his family, independent of fluctuations of trade.

These reflections are not introduced to discourage the emigration of mechanics to Louisiana. Few places where their services are better paid; but the contrast is drawn to exhibit the enormous advantage that the agricultural emigrant has over those of the mechanical professions; in estimating the difficulties attending the removal to and fixing a residence in the state of Louisiana; to the former class of emigrants the prices of the necessaries and conveniencies of life are nothing; to the latter, every thing.

Cotton, the most valuable of all vegetable substances not used as food, its discovery was perhaps the greatest improvement ever made on the subject of clothing. Its introduction into use deserves very serious attention, in every speculative work on Louisiana. So much has been introduced, relative to cotton compared with sugar, as to much abridge the necessary enlargement of the subject.

Unlike sugar cane, cotton is unlimited by difference of soil or climate in southern Louisiana. Flexible in its texture, cotton grows on almost every kind of land, more rapid than the sugar plant in the developement of its organization; its life is shorter, of course less liable to fall by frost,

From one to any given number may be employed in raising cotton; perhaps no vegetable, unfit for food, demands less capital to commence its culture. Most families have commenced their career in southern Louisiana by cotton.

Of all productions that man has appropriated to the gratification of his wants, cotton wool has advanced most rapidly into use. We may safely conclude, that unlike objects of caprice or luxury, cotton can never become retrograde in any great degree. The indefinite forms into which this substance can be manufactured, its cheapness and elegance, and above all, its real uses secure it like the cereal gramina, the olive, and metallic matter; an existence amongst objects most familiar to the wants of human nature, commensurate with the duration of the present order of things in the world.

Several years past, upwards of sixty million pounds of cotton wool was sent into Europe, mostly from America—upwards of forty millions from the United States. Many persons have contended, that this great importation of cotton arose from momentary circumstances; but a very superficial review of the relative situation of Europe and America must remove this impression.

Glancing an eye over the American and European nations, the extensive disproportion between the population and territorial surface of those great portions of the earth, must present a striking picture of moral and physical inequality.

Maugre revolutions of power, opposed to every political change, and despite of all fiscal arrangements, except high duties on foreign goods, the course of commerce will be for ages to come as it has been for two centuries past. Carrying the raw material from America to Europe, and taking the return in manufactured articles: This barter has its origin in nature, and must continue until things change materially their present relative proportion. It is this very barter, whose interruption has shaken the very basis of society from the Wolga to the Mississippi.

In Europe, from the scarcity of land in most parts, barrenness of many places, and the overcharge of people every where, the natural bent of human industry is to rear the necessaries of life, and purchase superfluities from foreign markets—every spot is precious to a people crowded into masses on a small extent. Thousands are driven by necessity to have recourse to manufactures, from the impossibility to occupy themselves in agriculture. In such places animals will be dispensed with in proportion as the benefits derived from their use can more easily be procured from foreign sources. Hence cotton must for many ages encroach upon wool, in their respective application as articles of clothing.

At the moment this article was written, the people of Europe, with whom we have commercial relation, exceed the people of the United States of America in a ratio exceeding nine to one, whilst the inhabitants of the latter country exist on more than half the surface.

The average land possessed by an individual in Europe, in the thickly peopled parts; France, Spain, Italy, Germany, England, and the Netherlands, is about five English acres. The American population roam over more than one hundred acres to each individual, or have twenty-fold more surface to exist upon, than is possessed by an individual in the compactly inhabited European nations.

Supposing the latter to remain stationary, and the former to double every fifty years, more than two centuries must elapse, before an equilibrium can ensue. The space now occupied by the United States population, may be assumed at 1,500,000 square miles, or 960,000,000 acres; and the present number of inhabitants concerned in the calculation 9,000,000.

Amongst European nations, the proportion of people that hire, must be enormously greater than their employers; therefore, human labor cheap. In America, the number that are compelled to sell their services to others, few; consequently, human labor is dear.*

* The following will tend to expose the falsity of an idea, very common, and very unfounded, that it arises from the scarcity of men in the United States, that human labor is high in price, and hard to procure.

Where most men labor for themselves, as in the United States, those whose pursuits compel them to purchase human labor, must give a price commensurate to the value of the same services if performed upon his own account by the hireling. Generally, in fact, such is the spirit of independence instilled by free institutions, that men will prefer less pecuniary profit, whilst they retain their personal, though less produc-

In Mexico, where few act on their own account, but sell their labor to others, it is of course low in value. In estimating the real benefit that a human being can gain by his daily industry, a correct contrast must be drawn between the nominal sum he receives, and what nominal sums he must pay for the indispensable articles of subsistence. If the cent is assumed as the integer of money in the United States, it will at once appear, on comparison of the prices of labor and articles of food and clothing, in the United States and Mexico, that the difference of diurnal gain, is in favor of the former, as three to eight. As far as the mere scarcity of men could influence the price of their labor, in Mexico would the day's work be higher than in the United States. Few pursuits, hence manufacturers and others who hire, are compelled to pay a premium above the mere value of the labor they purchase.

“After having compared the mean product of the earth in Mexico, Buenos Ayres, the United States, and France. In the colder parts of the Vice-royalty of Mexico, day labor is valued at twenty-five cents; but in the warmer provinces, where hands are scarce, and men are idle, day labor is thirty-one and a half cents.

“This price must appear very small, when we consider the metallic wealth of the country; and view the great quantity of silver constantly in circulation.

“In the United States, labor is about eighty cents per diem.

“The mean price of wheat in the Mexican provinces, is four or five dollars for two hundred pounds; or this is the price when purchased from the farmer in the country. In Paris, for several years, two hundred pounds of wheat flour cost thirty francs, equal to six dollars. In Mexico, the expense of transport swells the price of wheat above the ordinary price in the country.

“Humboldt.”

er have profitable demand for human services in Mexico; many have that demand in the United States; from these causes, and not from scarcity of men in one case, and their abundance in another, does the difference in the value of their work arise.

Taken then, on the general scale, during the existence of the present order of things, it physically follows, that the people of the United States will remain cultivators, rather than manufacturers. Until the lapse of time, and the operations of nature, produce an equilibrium between the people of the American continent, and the eastern, no real revolution can take place in the relations of commerce, between those two great portions of the earth. Whilst the American citizen can find the path open and free to an independent establishment, he will never sell his labor at any price to another.

In moments of war, or other temporary interruptions of the ordinary operations of society, manufactures may be established in the United States; but owing their existence to accident, they will have continual embarrassment to encounter. It must be very difficult for a man or a society, to preserve manufacturing establishments where individual labor cannot be procured for less than seven or eight, opposed to other men, or other societies, who can procure the same quantum of labor, for three or four metallic signs. Nothing indeed but a system of absolute seclusion of all communication with the eastern world could support widely extended manufacturing establishments in the United States at the present time.

GENERAL SKETCH

OF THAT PART OF

WEST FLORIDA,

INCLUDED IN THE STATE OF LOUISIANA.

THIS small tract is bounded on the east by Pearl river, north by 31° N. lat., west by the Mississippi river, and south by Bayou Iberville, Amite river, and lakes Maurepas and Pontchartrain; extending over 4850 square miles of surface. Soon after the incorporation of this part of West Florida, into the state of Louisiana, it was divided into the four parishes of, East Baton Rouge, New Feliciana, St. Helena, and St. Tammany. These parishes will be described under their respective names.

Few places of an equal area, can exceed this tract in local advantages. Its proximity to New Orleans, renders it in many respects extremely well adapted to supply that growing city with numerous articles of daily demand and primary necessity.

Rivers—are the Mississippi, Comite, Amite, Tick-fah, Tangipao, Chifuncté, Bogue Chito, and Pearl.

The Mississippi has been sufficiently noted in the general description of that river, and need not be descanted on more diffusely in this place.

The Comite rises in Wilkinson county, in the Mississippi territory, and after a course of forty miles, falls into the Amite, twelve miles nearly east from Baton Rouge.

The Amite river rises in the Mississippi territory, about twenty miles north of the town of Liberty, in Amite county. The two constituent streams of the Amite remain separate in their course through the Mississippi territory, but unite immediately after entering West Florida; and then pursuing a comparative course of a little west of south, fifty miles, joins the Iberville, and turns thence east forty miles, falls into Lake Maurepas. The whole length of the Amite exceeds one hundred miles. Below the junction of Amite and Iberville, the united streams form a fine navigable river, admitting vessels of six feet draught.

Ten miles N. E. of the forks of the Amite, and within the Mississippi territory, rises the Tickfah, yet a creek of trivial size when it enters West Florida; it then becomes gradually augmented by several creeks, and after a south course of fifty miles, falls into lake Maurepas, four miles N. E. of the mouth of Amite. Three miles above its mouth, the Tickfah receives from the east the united streams of the Notalbany and Pontchatoola, upon the latter stands Springfield, on the road from Madisonville to Natchez.

Schooners from New Orleans stop at Springfield; forming one of the landing places of travellers from New Orleans to Natchez.

The Tangipao, though larger, has hitherto been less noted than the Tickfah. Rising in the Mississippi territory, between the waters of the Amite and Bogue Chito, the Tangipao runs nearly south seventy miles, falls into lake Pontchartrain ten miles N. E. of the pass of Manchac. This river has yet attracted but little attention, few settlements, and none of consequence, have been formed on its banks.

Chifuncté rises in West Florida, its whole comparative length does not exceed forty miles; but this little river is rendered remarkable from having the thriving town of Madisonville on its banks. The depth of water in the mouth of Chifuncté is greater than in that of either the Amite, Tickfah, or Tangipao. Any vessel that can pass the Rigolets, can find a safe harbor, and sufficient water, in the Chifuncté, six or seven miles above its entrance into lake Pontchartrain.

The Bogue Chito has its source in the Mississippi territory, and pursuing a course of S. E. by south eighty miles, enters the Pearl river twenty miles from the junction of the latter with the Rigolets.

The Pearl, a stream of much greater importance than the preceding, is the largest river between Mississippi and Mobile. The Pearl rises in the

Mississippi territory, above 33° N. lat. runs S. W. seventy miles, turns a little east of south eighty miles, enters west Florida, and from thence in a south course of fifty miles forms the eastern limit of the state of Louisiana. The whole length of Pearl by comparative course, is one hundred and eighty miles. Many streams of considerable size beside the Bogue Chito, contribute to swell the Pearl; but its navigation is much impeded with shallows, and timber, does not equal in facility of ingress, what might be expected from its column. Many spots of excellent land is found on the waters of the Pearl; but the country on its waters cannot be considered fertile; immense pine forests spread themselves on both banks and reach within a few miles of the mouth of the river.

Before entering the Rigolets, the Pearl divides into several channels. Timber almost entirely ceases; and here commences that sweep of open marsh prairie that skirt the front of Louisiana, from thence to Sabine. No doubt the alluvion of the Pearl formed the neck of land between lakes Pontchartrain and Borgne, as has the Tangipao that between lakes Pontchartrain and Maurepas.

The tract between the Mississippi and Pearl, bordering on the delta of the former, is divided into two distinctive portions. The southern section twenty miles wide and seventy long, is an almost unbroken plain, rising like the prairies of Opelousas and Attacapas, by a very slow acclivity, from its south to

north extremity. This plain is covered in its whole length by a thick forest. The most remarkable trees are, the liquidamber styraciflua, pinus taeda, pinus rigida, cupressus disticha, ulmus aquatica, acer rubrum, quercus tinctoria, quercus alba, quercus virens, quercus aquatica, quercus phellos, juglans amara, juglans porcina, nyssa sylvatica, nyssa aquatica, fraxinus tomentosa, salix nigra, celtis crassifolia, gleditsia triacanthos, and diospiros virginiana.

Of the above trees, the liquidamber, styraciflua, and the quercus tinctoria is by far most abundant. The quercus virens is mostly confined to the borders of streams, and entirely disappears before reaching the northern extremity of the plain. The cornus florida abounds, as does also the arundo gigantea.

When approaching the Mississippi, the liriodendrum tulipifera appears. West of Amite that tree is met with of large size; in the neighborhood of Baton Rouge, it forms considerable part of the timber used at that place.

The laurel magnolia, also abounds over the whole extent of this plain; but deserves less attention than most other forest trees, from the uselessness of its wood for most purposes to which other timber is appropriated.

The soil of this plain is of second rate quality; though alluvion, evidently owing its origin rather to the adjacent pine hills, than to the more

fertile spoils of the Mississippi. It is well adapted to maize and cotton, the usual crops yet cultivated. Some parts would suit the culture of rice; but hitherto that grain has been almost exclusively cultivated in Louisiana on the margin of the Mississippi, and lands analagous.

The second section is very nearly of equal area with the foregoing; but differs essentially in most other respects. The surface is broken, often considerably elevated, the soil diversified in quality; near the streams often fertile, but a much greater proportion covered with pine, (*pinus rigida*,) and sterile. Springs of excellent water become frequent, the creeks and rivers fine bold streams of very pure limpid water.

The common timber *pinus rigida*, *quercus tinctoria*, *quercus falcata*, *quercus alba*, *liquidamber styraciflua*, *nyssa sylvatica*, *juglans porcina*, *juglans tomentosa*. Near the Mississippi, the *liriodendrum tulipifera* is found of very large growth.

On Thompson's creek, on Bayou Sara, and on Alexander's creek, grow some few stems of the *acer nigrum*, or black sugar tree, very rare in Louisiana. The *cornus florida* is found intermixed with the other trees in all parts, excepting the higher pine forests. Many species of native *vitis* are met with in abundance; the most remarkable of which is the *vitis verrucosa*, or muscadine. The *arundo gigantea* cover the banks of the water courses, particularly the Amite, and Cormite rivers, Thompson's creek, and Bayou Sara.

Cotton and maize are yet and will in all probability remain the common crops of this range. The land of the northern part of the parish of East Baton Rouge, and that of the whole parish of New Feliciana is amongst the best of southern Louisiana for cotton. Tobacco might be also produced, but has happily been superceded by more useful vegetables.

The hill at Baton Rouge is the first eminence that appears on the banks of the Mississippi, above its mouth. The elevation at Baton Rouge has been most egregiously exaggerated. From high water mark in the river to the level upon which the town and fort stand, does not exceed, if it amounts to twenty-five feet.

The same hills that compose the bluffs on the Mississippi, below the mouth of Ohio, are only cut by the various streams; and forms the western abutment of a vast expanse reaching from Georgia to the Mississippi. Baton Rouge may be said to occupy the southwestern part of this area.

The western border of both these sections is formed by the left shore of the Mississippi. In soil, timber, and cultivated vegetables, this part has in every respect a perfect semblance to other settlements on the alluvion of the former river, therefore particular description is precluded.

The legal division of the state of Louisiana into parishes is laid down upon the map. The counties

and districts are not delineated. So much confusion would have been superinduced by so many conflicting subdivisions, that it was judged more conducive to perspicuity, to place upon the map, only the parochial lines, and to give the verbal description in the same manner.

The state of Louisiana is divided into twenty-five parishes, whose natural positions are; six north of 31° N. lat.; three south of 31° N. lat. and west of Atchafalaya river; and sixteen east of Atchafalaya. Their respective extent in square miles, and population, in 1810, is exhibited by the following table.

STATISTICAL TABLE of the extent of the Parishes of the State of Louisiana, and their Population in 1810.

Parishes.	Sq. Miles.	Acres.	Arpents.	Popula- tion in 1810.
Plaquemines	1500	960,000	1,134,300	1549
Orleans	1300	832,000	983,060	24,552
St. Bernard	400	256,000	302,480	1020
St. Charles	300	192,000	226,860	3291
St. John Baptiste	150	96,000	113,430	2990
St. James	170	108,800	128,554	3955
Ascension	350	224,000	264,670	2219
Assumption	500	320,000	378,100	2472
Interior of La Fourche	2500	1,600,000	1,890,500	1995
Iberville	350	224,000	264,670	2679
West Baton Rouge	850	544,000	642,770	1463
Point Coupée	600	384,000	453,720	4539
St. Mary's and St. } Martin's, Attacapas }	5100	3,264,000	3,856,620	7369
St. Landré, Opelousas	7600	4,864,000	5,747,120	5048
Natchitoches	10,600	6,784,000	8,015,720	2870
Ouachitta	4000	2,560,000	3,024,800	1077
Rapides	2300	1,472,000	1,739,260	2300
Ocatchoola	2000	1,280,000	1,512,400	1164
Concordia	2100	1,344,000	1,588,020	2875
Avoyelles	700	448,000	529,340	1109
New Feliciana	1050	672,000	794,010	} 10,000
East Baton Rouge	500	320,000	378,000	
St. Helena	1300	832,000	983,060	
St. Tammany	2000	1,280,000	1,512,400	
	48,220	30,860,800	36,463,964	86,556

Parish of Plaquemines.

Bounded S. W. by the gulph of Mexico, S. E. by the gulph of Mexico and Chandeleur bay, north by lake Borgne, and west by the parish of Orleans, and extends over fifteen hundred square miles of surface.

Rivers, are the Mississippi, Terre au Boeuf, Riviere aux Chênes, and Bayou Bastien.

Settlements are confined to the banks of the Mississippi, above Fort St. Philip, and to those of Terre au Boeuf, above its confluence with lake Lery. Some lands fit for culture exist on Bayou Bastien; but not of great extent, and remain mostly unoccupied. The border of the Mississippi and Terre au Boeuf are similar in soil and timber. When receding but a short distance from either, the surface of the earth sinks to a level with high tide; and is devoid of wood, is covered with grass, and is an irreclaimable morass.

The whole of this parish is within the sugar climate, and what surface is arable, has an excellent soil, some of the largest sugar estates yet formed on the Mississippi, is within its limits.

Maize, rice, tobacco, indigo, and cotton, are all produced; and each might, especially rice and cotton, become its staples; though sugar claims that pre-eminence at present.

The indigenous timber trees.—The quercus virens, chiefly on Terre Aux Boeufs and Riviere Aux

Chênes ; the quercus lyrata, quercus phellos, the fraxinus tomentosa, acer rubrum, magnolia grandiflora, cupressus disticha, nyssa aquatica, diospiros virginiana, juglans aquatica, gleditsia triacanthos, laurus carolinensis, Platanus occidentalis, liquidamber styraciflua, celtis crassifolia, ulmus alata, ulmus Americana, populus angulata, and salix nigra.

No towns have yet been built in this parish, or from the proximity to New Orleans will any, in all probability, rise, possessing any considerable population. Woodville was laid out many years past, near the English Turn, but has made but little progress.

The important post of Fort St. Philip, at the Plaquemine bend, is emphatically one of the defences of Louisiana. Fort St. Leon, at the lower extremity of the English Turn, is well situated to impede the progress of ships of war up the Mississippi. Fort Darby, at the confluence of Terre Aux Boeuf, and the discharge of lake Lery, was built during the campaign of 1815, under the direction of the author of this work ; by order of general Jackson, to prevent the advance of the enemy through the Terre Aux Boeuf, or Riviere Aux Chênes.

Parish of Orleans.

Bounded north by lake Pontchartrain and the Riglets, east by lake Borgne, and the parish of Plaquemines, S. E. by the gulph of Mexico, and west by the parishes of St. Bernard and the interior of La-

fourche; possessing an area of one thousand three hundred square miles.

Rivers and Bayous.—The Mississippi, Chef Menteur, Rigolets, Bayou Bienvenu, Bayou Sauvage, or Gentilly, Bayou St. Johns, and the chain of Bayous that connect the Mississippi with Barataria Bay.

Bays and lakes.—Lake Pontchartrain, lake Borgne, Barataria Bay, gulph of Mexico, Caminada Bay, and lake Des Islets, lake Ronde, Little Lake, and the Quacha Lake.

Soil, climate and vegetable productions.—Most of the surface of the parish of Orleans is morass, covered with grasses of different kinds. Wood is only found upon the banks of the Mississippi, Bayou St. Johns, Bayou Sauvage, the sources of the bayou Bienvenue, and some strips upon the various lakes and bayous towards Barataria Bay. The climate is within the range suitable to the sugar cane. Many very fine sugar farms are in operation, both above and below New Orleans. Maize, rice, indigo, cotton, and tobacco, all grow luxuriantly; the four last have, and except indigo, continue to form staple commodities. Most culinary vegetables suitable to the climate are cultivated in the parish, and brought into the market in New Orleans. The peach, orange, and three or four species of the fig, are the exotic fruit trees that have been most extensively introduced on the Mississippi. All those fruits are in their respective seasons

abundant in the New Orleans market. Apples are mostly brought down the Mississippi, and are in winter and spring sold cheap. Of culinary vegetables the most abundant are pulse of all kinds, cabbages, turnips, sweet potatoes, onions, carrots and lettuce.

The indigenous forest trees.—The *cupressus disticha*, *populus angulata*, *platanus occidentalis*, *liquidamber styraciflua*, *salix nigra*, *celtis crassifolia*, *nyssa aquatica*, *gleditsia triacanthos*, *diospiros virginiana*, *fraxinus tomentosa*, *acer rubrum*, *acer negundo*, *ulmus Americana*, *ulmus alata*, *juglans aquatica*, *quercus virens*, *quercus phellos*, *quercus lyrata*, *quercus aquatica*, and *quercus falcata*. Some stems of the *ilex opaca* are found, but the tree is rare; the same observation may suffice for the *gleditsia monosperma*, and the *morus rubra*.

For buildings of all kinds where wood is used, cypress (*cupressus disticha*,) is most in demand. Fuel is composed generally of the *fraxinus tomentosa*, *acer negundo*, *quercus lyrata*, *salix nigra*, and *celtis crassifolia*.

Towns, villages and forts.—NEW ORLEANS, the capital of the parish, and of the state of Louisiana, stands upon the left bank of the Mississippi; $29^{\circ} 57'$ N. lat. $90^{\circ} 8'$ west of Greenwich, $13^{\circ} 9'$ west of Washington City, one hundred and five miles following the stream, above the bar at the mouth of the Mississippi, and about ninety miles in a direct line.

New Orleans consists of the city properly so named, in the form of a parallelogram, 1320 yards along the river, and 700 wide, backwards towards the swamp. Above the city and adjoining, is the suburb St. Mary, and above St. Mary's, the suburb of the Annunciations. Below the city are the suburbs Marigny, Daunois, and Declouet. Between the city and Bayou St. John, is St. Claude and St. Johnsburgh.

But little of the ground laid out in streets and lots, in the suburbs, is yet built upon. The houses, except in the city, occupy but a small distance from the river. Wood is the chief material, though many fine brick buildings exist, and that substance is annually increasing in use. Stone is found at too great distance to be ever very extensively used in New Orleans.

The streets are not yet paved; though a paved foot-way lines most streets in front of the houses, with gutters to carry away the surplus water.

Public buildings deserving notice.—The Principal, or town-house, at the N. W. corner of Chartres and St. Peter's streets; the hospital, standing in the suburb St. Mary, opposite the square, between Dauphin and Burgundy streets. The church of St. Louis in front of Orleans street, upon Chartres street. The convent of Ursulines, upon Ursuline street, between Levée and Chartres streets. The barracks, upon Garrison and Levée streets. The custom house, in

front of the square between Canal and Levée streets. The market house, upon the Levée, in front of the square between St. Anne and Du Maine streets. Orleans bank upon Conty, between Chartres and Royal streets, Louisiana bank, upon Royal, between Conty and St. Louis streets. Planters bank, S. W. corner of Conty and Royal streets. Government house, N. W. corner of Levée and Toulouse streets. District court of the U. S. upon Royal, between Du Maine and St. Philip streets, and Latrobe's water works, on Levée, in front of the square between Ursuline and St. Philip streets.

By the census of 1810, New Orleans and suburbs contained 17,242 persons. There has been a constant, and sometimes a rapid increase since the period of taking the census. An annual increment of 1000, may be safely added, giving for the present population 23,242 persons. The actual number exceeds, rather than falls short of this estimate.

No city perhaps on the globe, in an equal number of human beings, presents a greater contrast of national manners, language, and complexion, than does New Orleans. The proportion between the whites and men of mixed cast or black, is nearly equal. As a nation, the French amongst the whites are yet most numerous and wealthy; next will be the Anglo-American; thirdly, the natives of the British Islands. There are but few Spaniards or Portuguese—some Italians; and scattering individuals of all the civilized nations of Europe.

Much distortion of opinion has existed, and is not yet eradicated in the other parts of the United States, respecting public morals and manners in New Orleans. Divested of pre-conceived ideas on the subject, an observing man will find little to condemn in New Orleans, more than in other commercial cities; and will find that noble distinction of all active communities, acuteness of conception, urbanity of manners, and polished exterior.

There are few places where human life can be enjoyed with more pleasure, or employed to more pecuniary profit.

Fort St. Charles occupies the space between the N. E. extremity of New Orleans, and the south extension of Marigny's Suburb. This fort is one of four, that under the government of Spain, stood at each corner of the city. The American government have demolished the other three. Except as a residence for the officers of the army, fort St. Charles cannot answer many military purposes. To either check the advance, or repulse the attacks of an enemy, it could yield but little aid.

Fort St. Johns, at the entrance of Bayou St. Johns into lake Pontchartrain, is very well situated to defend this important pass. From the nature of the country, armies can only proceed by water to New Orleans; and St. Johns could not easily be either taken or passed, if well garrisoned and defended.

Fort Petite Coquilles, at the junction of the Rigolets with Pontchartrain, is one of the most important posts in Louisiana. It is the key to West Florida, and effectually covers one flank of New Orleans. While this excellent position is maintained, it would be extremely difficult for an enemy to get into the rear of the city, and if well constructed, strongly garrisoned, and skilfully commanded, few places could present a more formidable aspect to a besieging army; the country around devoid of wood, and mostly a morass, would render very hazardous either sudden attack or regular approach.

It is impossible for the government of the United States to bestow too much care upon this post. The writer of this work was present in New Orleans during the interesting campaign that closed the last eventful war. So completely was the public convinced of the vital importance of Petite Coquilles, that every account from it was eagerly received, and every report of cannon in that direction excited more than usual anxiety. A defeat of the United States army could scarce have created more despair in the city, than would have an account that the Petite Coquilles was taken by the enemy. His severe repulse at Mobile Point prevented in all probability an attack. The British vessels came often into the Rigolets, but never advanced within cannon shot of the fort.

Petite Coquilles and St. Philip are the great outposts of New Orleans, the other water courses are so long, shallow, circuitous and intricate, as to preclude

an easy approach ; there is then but little to fear for New Orleans, whilst the Mississippi and Rigolets are successfully defended.

Parish of St. Bernard, or German Coast.

Bounded east, by the parish of Orleans, N. E. by lake Pontchartrain, N. W. and west, by the parish of St. Charles, and south by the parish of the Interior of Lafourche.

The soil and surface differ in nothing essential from that of Orleans. The natural products remain the same.

The two banks of the Mississippi are the only habitable part, and is highly cultivated. Sugar is the staple commodity. Cotton and rice are cultivated to considerable amount. So much unity of appearance and improvement exist upon the Mississippi, between Iberville and the English Bend as to render the description of one part that of all others.

Parish of St. Charles, or Bonnet Quarre.

Bounded E. and S. E. by the parish of St. Bernard, N. E. by lake Pontchartrain, and pass of Manchac, north by lake Maurepas, and west by the parish of St. John Baptiste. Soil, natural products, staple, and general aspect, the same as the preceding.

St. John Baptiste, or Cantrell's Parish.

Bounded S. E. and east by the parish of St. Charles, north by lake Maurepas, N. W. by the parish of St. James, and S. W. by the parish of Assumption; soil, natural productions, and staple remains nearly similar to the preceding. Cotton is now more, and sugar less cultivated, than nearer New Orleans.

St. James, or the parish of Acadien Coast.

Bounded S. E. by the parish of St. John Baptiste, S. W. by the parish of Assumption, N. W. by Ascension, and N. E. by Amite river.

Though the New river runs through, and the Amite river forms part of the outline of this small parish, little or no land within it is yet cultivated, except the margin of the Mississippi. The banks of the Amite is here, too low for settlement, but is bordered with excellent timber of almost all species that grow in the low land of the Mississippi. Here, first on the island of Orleans, begins to appear the *pinus taeda*; which tree is scattered along both banks of the Amite, considerably above Galvezton. To the species of trees enumerated in the foregoing parishes, may now be added, in large quantity, the *quercus tinctoria* and *quercus falcata*. This latter tree, in all parts of Louisiana, announces the transition from the recent to the more ancient alluvion. Advancing from the mouth of the Mississippi to Opelousas, the *quercus falcata*

becomes more abundant. It is often found upon overflowed lands; but is there evidently out of the soil most congenial to its growth; and where the overflow exceeds twelve or fifteen inches, this tree no longer exists.

The quercus virens abounds upon New river, and is also plentiful upon the Amite. This invaluable timber is perishing rapidly in many parts of Louisiana; and in none more so than on the New river. Wherever the arundo gigantea exists, all the forest trees amongst which it grows, are liable to annual destruction by fire. The ruin that this comparatively small vegetable has effected in the forests on the Mississippi, and connecting streams, is great beyond belief.

Sugar and cotton may be considered the staples of the Acadian coast. Rice is cultivated, but not extensively.

It has been noted,* that the orange tree does not succeed well on the Mississippi above 30° N. lat. It is scarce above the church of St. Bernard, and in the parish of Acadian coast becomes very rare.

Parish of Ascension.

Bounded S. E. by the parishes of St. James and Assumption, S. W. by Atchafalaya, N. W. by the parish of Iberville, and N. E. by Amite river.

That part of this parish lying on the left bank of the Mississippi, presents so perfectly the same natural and artificial features, with those of the Acadien coast, that all additional observation would be repetition.

On the right bank of the Mississippi, when receding from that river towards the Atchafalaya, the country is annually inundated.

This parish, though extending over but three hundred and fifty square miles, is remarkable for possessing almost every forest tree and shrub in the state of Louisiana, except the *pinus australis*, the *pinus rigida*, the *robinia pseud acacia*, and the *juniperus virginiana*. Forming with the parish of Iberville the link that unites West Florida to the bank of the Mississippi, and Atchafalaya; this contracted spot possesses an extraordinary richness of natural production. We will be more diffuse in sketching the various species of trees and shrubs, in the parish of Ascension, as the list will suffice for the parishes of Iberville, the Assumption, and the Interior of Lafourche.

Indigenous forest trees and shrubs.—*Nyssa aquatica*, *nyssa sylvatica*, *cupressus disticha*, *pinus taeda*, along the Amite; *quercus tinctoria*, *quercus virens*, chiefly on the Amite and New rivers; but it exists on the borders of all the streams in the parish; *quercus falcata*, *quercus lyrata*, *quercus aquatica*, *quercus alba*, *quercus phellos*, *quercus rubra*, *ulmus aquatica*;

ulmus americana, castanea pumila;* ilex opaca, diospiros virginiana, salix nigra, juglans nigra, juglans amara, juglans porcina, juglans laciniosa, juglans myristicaeformis of Michaux, juglans tomentosa; the fraxinus tomentosa, fraxinus americana, celtis crassifolia, magnolia grandiflora, gleditsia triacanthos, gleditsia monosperma, laurus sassafras, laurus caroliniensis, platanus occidentalis, liquid-ambar styraciflua,† acer rubrum, acer negundo, populus angulata, tilia pubescens, morus rubra, carpinus ostrya, carpinus americana, and andromeda racemosa.

The arundo gigantea grows in immense brakes in all parts of the parish of Ascension, not liable to annual submersion. Much of that majestic grass has been destroyed by the clearing of the lands; but a vast quantity still remains. Along both banks of New river, in the rear of the plantations on the Mississippi, and on the banks of the Atchafalaya, are the places where most of the arundo yet exists. Here, as well as in every other part of Louisiana, where the

* The chincapin tree vegetates on an immense range of Louisina, and exists in great variety of soil. It is found on the border of the overflowed land, often more than a foot in diameter; but always of diminutive elevation compared to its thickness.

† The sweet gum is perhaps the most universal tree in Louisiana; it certainly grows upon greater variety of soil, than any other tree in that country. Upon the highest hills, in society with the quercus tinctoria, liriodendrum tulipifera, pinus rigida, and quercus feruginea; and in the deepest swamps, admixed with salix nigra, diospiros virginiana, nyssa aquatica, and cupressus disticha; the sweet gum is found growing in vast numbers. On the border of the overflowed lands, and near the margin of the large prairies the sweet gum attains the full expansion of its column of matter.

land sinks too low for the arundo, is found the *chamaerops louisiana*.* The latter vegetable cannot itself exist, where the inundation exceeds in depth 15 or 20 inches. The land is commonly of the best quality. Much of the surface of the country low upon the Mississippi, now cultivated in cotton, maize, rice, and sugar, was originally covered with the palmetto. From the greater depression of the surface, the palmetto land is more difficult to reclaim, than that naturally covered with arundo gigantea; though equal in fertility when reduced to a state of cultivation.

The timber trees most usually associated with the palmetto, are, the *quercus phellos*, *quercus rubra*, *acer rubrum*, *acer negundo*, *liquidamber styraciflua*, *ulmus aquatica*, *cornus alba*, and *celtis crassifolia*. The *quercus tinctoria*, and *quercus virens*, are often found growing upon palmetto land, but not so frequent as the preceding. The *nyssa aquatica*, and *cupressus disticha*, would appear from their general history, to be congenial to the palmetto land; the latter tree is sometimes found intermingled, and the former growing on inundated land adjacent to; but neither are so commonly met with on palmetto land, as might be expected.

* We have given to this vegetable the name of *chamaerops louisiana* in the text; and are of opinion that there is a specific difference between the *chamaerops palmetto* hitherto known to botanists, and that of Louisiana. The *chamaerops serrulata* of Muhlenberg is certainly not the same with the palmetto of Louisiana; the latter bears a much greater resemblance to the cabbage tree, though much more humble in elevation, than to the saw-leaved palmetto of Georgia.

The palmetto may be correctly considered the vegetable that marks the limit of annual inundation. In all places where we have had good reason to consider the overflow annual, the palmetto ceased. Though able to resist partial and occasional immersion of its roots in water, we are led to believe this shrub would perish if the ground upon which it grew was subject to annual overflow.

The trees are usually covered with an immense quantity of vines, of many different species; amongst which, the various kinds of smilax, are the most remarkable, and the smilax rotundifolia, (green briar) the most troublesome to those who have either to clear the land, or pass through these entangled woods.

Rivers, lakes and bayous.—That outlet of the Mississippi, which has received emphatically the name of Lafourche, (the fork,) leaves the parent stream in this parish, at $30^{\circ} 7' N.$ lat. and $91^{\circ} W.$ long. from Greenwich; and seventy-five miles above New Orleans. The Lafourche, when leaving the Mississippi, is not more than eighty yards wide, and very little below the ordinary autumnal level of that stream. In some very extraordinary seasons, the Lafourche has been dried at its efflux; it is fordable nearly every year, in October and November.

The Lafourche, like the Mississippi, receives no tributary streams; the bayous flow from it in all its length. Two bayous take their source near the efflux of Lafourche, one from each shore. Bayou

Cabanosé, drains the angle between the Lafourche and Mississippi; receives tributary water from the parishes of St. James, St. John Baptiste, and St. Charles, and is finally lost in that chain of lakes that lies S. W. of New Orleans. Another bayou rises west of Lafourche, runs S. E. into lake Verret.

Lake Natchez lies along the N. W. extremity of the parish, and is the passage around the lower raft in Atchafalaya.*

The entire space from the Lafourche to the Atchafalaya is annually inundated; consequently cannot be considered of much relative value, except for timber, with which, as has been observed, it abounds.

Towns.—The thriving town of Donaldsonville, at the efflux of the Lafourche, is the first village on the Mississippi worth notice above New Orleans. The town has been laid out upon the Mississippi, below the discharge of the Lafourche, and extends down both rivers. It is now the seat of justice for the parish, and has a connecting post office, between the country in the south western parts of the state, and those parts that lie east of the Mississippi and Atchafalaya.

Parish of Assumption.

Bounded N. W. by Ascension, S. W. by Atchafalaya and lake Chetimaches, S. E. by the parish of

* See page 120.

the interior of Lafourche, and N. E. by the parishes of St. James and St. John Baptiste.

Every thing relating to this parish has been already noted; it will be sufficient to observe, that except the bank of Lafourche, but little surface in this parish can be cultivated. Some few settlements have been made upon Bayou Cabanosé, and some upon the banks of the small stream that unites Lafourche to lake Verret, but they are of limited consequence.

Sixteen miles from Donaldsonville, a small canal was many years past cut from the left bank of Lafourche, into a small creek or bayou, that communicated with lake Verret. Along the right bank of the canal a road has been opened. This canal and road now form the great thoroughfare to the Opelousas, Attacapas, and other places west of the delta of the Mississippi.

A public ferry, from Lafourche to Teche, has been established by law, and has been for some years past very well conducted. Men, horses, and carriages, are carried through the chain of lakes with perfect safety. The mail is also conveyed weekly by this route, and seldom fails.

Parish of the Interior of Lafourche.

Bounded N. W. by the parishes of Assumption and St. Marys, N. E. by St. Charles and St. Bernard, east by the parish of Orleans, and south by the gulph of Mexico.

The wide extent embraced by this parish becomes of great importance, from lying within the sugar climate, and from the great proportion of its area capable of culture.

The natural productions, or cultivated vegetables, differ in no essential point from the preceding ; therefore will need no recapitulation.

This parish is naturally divided into two portions, very distinct from each other. The first section consists of the wood land, upon the Lafourche and various bayous that flow into the gulph of Mexico. The second section is formed by that part of the great marsh prairie that lines the front of Louisiana. The latter division contains more than two-thirds of the superficial area of the whole parish. The sources of all the bayous that enter the gulph of Mexico between the Lafourche and Atchafalaya rivers, rise in the former and traverse the latter section in its progress towards their mouths. Before reaching the gulph, the entire outline of the parish sinks almost to the common level of the sea, consequently uncultivable.

Rivers, bayous, lakes, bays, and islands.—The Lafourche has upwards of sixty miles of its course in this parish. Narrow and shallow near the Mississippi river, the Lafourche imperceptibly augments in breadth and depth ; becomes, before reaching the gulph, a fine navigable stream, two hundred yards wide. There is at common tides about nine feet water on the bar, between the mouth of Lafourche and the point of

Timballier island. The Lafourche may with propriety be considered one of the inlets of Louisiana, and deserves the utmost attention in all arrangements that have either the defence or improvement of that country for their object. The river, after the bar is passed, retains depth of water for any vessel that can enter, upwards of fifty miles into the interior. The banks are thence to Donaldsonville in all respects similar to those of the Mississippi.

The margin of the Lafourche is peopled, and the shores defended by levées far below tide water. When the Mississippi is high, and discharges a large mass of water into the Lafourche, the current in the latter, as in the former, continues to the gulph; but in autumn, when the waters are low, there is then a marked difference between those rivers. The Mississippi always possesses water sufficient to overcome the tide, almost to the bars, of all the various passes, through which the water of that great river reaches the sea. The Lafourche, like the Atchafalaya,* when unaided by its parent stream, becomes stagnant, of course the tide flows a considerable distance into the interior from the river's mouth. Bayous D'eau Bleu, (blue water,) Derbane, Grand and Petite Caillou, Bayou Peau de Chevreuil and Bayou du Large, all rise in the wood section of the parish of the interior of Lafourche; their courses a little east of south, nearly parallel to the Lafourche. Not having great descent, none of these streams have much current. The lands on their banks excellent, and where sufficiently timbered and

* See page 150.

elevated, must become very valuable. Most of those lands remain public property; and have been surveyed under the orders of the United States government.

The land watered by Bayou Black and its tributaries is still superior to the preceding, as offering a larger proportional area of elevated alluvion on an equal surface.

The whole region comprised in the northern section of this parish, will form the most extensive sugar country, except the banks of the Mississippi, in Louisiana.

No towns or villages worth notice have yet arisen, or will soon arise on the lower part of the Lafourche. The improvements hitherto effected consist of sugar houses, saw mills, and other appendages to an agricultural people. The produce when made is generally sent to New Orleans market.

Parish of Iberville.

Bounded S. E. by the parish of Ascension, north by Bayou Iberville, N. W. by the parish of West Baton Rouge, and west by Atchafalaya river.

Nothing interesting, respecting the soil and productions, either natural or exotic, of this parish can be added to what has been detailed, when describing the parish of Ascension. Sugar and cotton are the staples; the latter encroaching upon the former in ascending the Mississippi.

Settlements.—Along the Mississippi, on both banks. In the space from the efflux of Iberville, to St. Gabriel church, the right shore has a marked superiority over the left, in quantity and quality of soil. Most of the best farms in the parish are on the former bank.

There exists reclaimable land sufficient upon the bayou Plaquemine, to admit culture. A settlement has been formed, chiefly upon the left shore of the bayou. The soil is equal to any in Louisiana ; but gradually declines in elevation from the Mississippi, to the discharge of Plaquemine into Atchafalaya, where the surface is liable to inundation by the reflux water, from the swamps.

There is also a settlement upon the Iberville, but not extensive.

Towns.—Galveston is the only place in this parish yet known as a village ; and though its situation is highly important in many respects,* it remains of little consequence, consisting of a few ruined wooden houses. This town must in the progressive advance of Louisiana, become a place of note. Its situation give it many natural advantages, that will in no great length of time be called into operation.

Attacapas.

Containing the parishes of St Martin's and St. Mary's, has been so amply described in the general

view of the state, as to abridge very greatly the necessary detail respecting its productions, natural or artificial.

Its rivers, bays, lakes, bayous and prairies have been all noticed, and most of them minutely delineated.*

The map presenting a distinct view of this remarkable country, will with what has been written upon this, and the adjacent parishes, supercede any more minute detail of either the indigenous or exotic productions, or natural features of Attacapas.

Opelousas.

Parish of St. Landré, bounded east by Atchafalaya river, S. E. by Attacapas, south by the gulph of Mexico, west by the Sabine river, north by the parishes of Natchitoches and Ocatahoolu, and N. E. by the parish of Avoyelles.

Few spots on the globe of an equal extent, exhibits more diversity of surface, or a greater variety of soil and vegetable production, than does Opelousas. Every forest tree found in southern Louisiana, except a few species, exist in Opelousas. Here are beheld all the changes of soil, from the deep fertile loam of Bayou Boeuf, to the sterile pine woods; from the broken hills of Bayou Crocodile, Calcasu and Sabine, to the Marsh Prairie on the gulph of Mexico; and from the deep, and almost impervious woods along Atchafalaya, to the widely extended plains that open

* See page 107.

their vast area, upon the banks of the Mermentau, and Calcasu rivers.

Opelousas presents four natural divisions, that differ materially from each other. The alluvial tract on the N. E. extremity, though the least extensive, is by far most valuable of the four sections. The pine woods occupy the N. W. and cover one half the whole parish. The prairies commence where the alluvion terminates; and running in a S. W. direction cover about one-third of the area of the parish. The sea marsh forms the fourth section, and may be considered the extension of the prairies, with the surface sunk by gentle declivity to a level with high tide.

So much has already been given respecting Opelousas, that little remains to add on that subject. Every plant and shrub cultivated generally in Louisiana, have been introduced, or attempted in Opelousas. If we except sugar cane, and the orange tree, most valuable vegetables have succeeded. Cotton, indigo, and tobacco have been, and the former now is, the staple commodity of the country.

The settlements begin on the alluvion of the Courtaubieu, Boeuf, and Teche; but are numerous, and compact, on the region contiguous to the above, but within the prairie tract. The land in both these sections is excellent, timber abundant, and very large.

The ridge of hills that divides the alluvion from the

prairie,* affords considerable variety of soil and surface. This ridge rises abruptly from the alluvion, but sinks by an imperceptible declination to the S. W. ; gradually becomes more broken, advancing through Opelousas to the N. W. ; and about the sources of the Crocodile assumes a very rugged aspect. Continuing its course through the state of Louisiana and province of Texas, this continuous ridge connects with the Caous mountains. The principal stream of Opelousas is the Sabine, next follows the Calcasu, Mermentau, Courtableau, and Teche, with their confluent waters. All those rivers have been noticed.

Natural productions.—The forest trees of Opelousas on the alluvion are, *quercus tinctoria*, *quercus rubra*, *quercus phellos*, *quercus falcata*, *quercus lyrata*, *quercus macrocarpa*, *populus angulata*, *liquidambar styraciflua*, *nyssa sylvatica*, *nyssa aquatica*, *cupressus disticha*, *fraxinus tomentosa*, *celtis crassifolia*, *salix nigra*, *tilia pubescens*, *liriodendrum tulipifera*, *magnolia grandiflora*, *magnolia glauca*, *laurus sassafras*, *laurus carolinensis*, *bignonia catalpa*, *ulmus rubra*, *ulmus americana*, *ulmus aquatica*, *gleditsia triacanthos*, *cerasus virginiana*, *castanea pumila*, *cerasus caroliniana*, (Laurier almond of the French,) *platanus occidentalis*, *ilex opaca*, *juglans nigra*, *juglans amara*, *juglans porcina*, *juglans myristicaeformis*,† and the *diospiros virginiana*.

* See page 95.

† On the Upper Teche, within this tract, was found the only stem of the *juglans cathartica*, we have ever seen growing in any part of southern Louisiana.

Of dwarf trees the most common are the *cornus florida*, *cornus alba*, *carpinus ostrya*, *carpinus americana*, *vaccinium stamineum*, and *laurus benzoin*. Immense brakes of the *arundo gigantea* cover the banks of all the streams near the hills. This fine vegetable ceases in advancing towards Atchafalaya, and is succeeded by the *chamaerops louisiana*; which in turn is followed by the clambering *smilax*.

Near the banks of all the streams where the *arundo* exists, grow also great quantities of the *phytolacca decandra* (poke), *sambucus rubra*, *morus scabra*, and *rubus fruticosus*, vegetables peculiarly indicative of a fertile soil.

The *vitis verrucosa* seems to have found a soil extremely well adapted to its organization. The greatest quantity of that vine, that perhaps exists in any spot of equal extent in America, is between Opelousas church and the hill of Bayou Rouge. The *vitis laciniosa*, and *vitis riparia*, overhang the streams. Several species of dwarf trees, and shrubs of little consequence, might swell this catalogue, but we trust, what is presented, will suffice to give the reader an enlarged idea of the great variety and importance of the vegetable productions of this remarkable spot.

On ascending the hills from the foregoing tract, an important change is at once perceived; now are seen the *juglans squamosa*, *juglans poreina*, *quercus ferruginea*; and advancing to the waters of the Mermentau, the *pinus rigida* insensibly increases in quantity.

The *liriodendrum tulipifera* now entirely ceases, the *juglans nigra* and *populus angulata* become rare. The woods have an entirely different aspect; the *arundo gigantea*, and *chamaecrops louisiana*, is superseded by the *vaccinium stamineum*, *vaccinium arboreum*, and other shrubs usually found on thin soil.

The prairies vary with the sections to which they are attached. In the N. E. they partake the fertility of the alluvion; on the north, towards the pine forests, the soil of the prairies differ but little from that of the adjacent woods. The S. W. prairies are flat and have much of the character of the sea marsh. It is indeed difficult to point out where the line of demarkation between the prairie and marsh exists.

The specific term of Pine Woods was given to the N. W. from the *pinus rigida*, forming the greatest part of the timber; but on the banks of most of the streams the pine is admixed with other trees, the most common species of which are *quercus tinctoria*, *quercus phellos*, *quercus alba*, *nyssa aquatica*, *liquidambar styraciflua*, *diospiros virginiana*, *fraxinus tomentosa*, *juglans porcina*, *juglans aquatica*, and the *laurus sassafras*. The *cornus florida*, and *cerasus caroliniana*, with various species of *vaccinium*, mingle themselves amongst the more majestic trees.

On the different creeks are many spots of good second rate land, but like the neighbouring prairies, this pine region invites rather the pastoral than agricultural emigrant.

In brief, the relative pursuits of the inhabitants of Opelousas will no doubt preserve their present form. Those near, or on the alluvion and adjacent parts, will continue to cultivate a soil, that is not in many other places either equalled or excelled; whilst in the distant prairies and pine forests, the sterile soil will compel the retention of cattle as support and staple.

The advance of population will at length induce the people to turn their attention to the rivers that intersect Opelousas; and withdraw a portion of their commerce from its present channel.

Pitch, tar, and turpentine, might be made in any given quantity; neither has been yet attended to worth notice.

The staples of Opelousas, at this time, are cotton, cattle, hides, tallow, cheese, beef, and pork. It has been disputed which of the two former yields the highest revenue on the same labor and capital. This question must remain without solution; so much depends upon local position, that no decisive data exists to render the contrast satisfactory.

It is no doubt, however, much more facile for new settlers to commence a pastoral than an agricultural establishment. The land suitable to the former being of much less value than that necessary for the latter.

Few persons, whose capital puts it in their power, but who will prefer the certainty of agriculture to all

other pursuits whatever. Perhaps some individuals could however be found in Opelousas, who unite more than ever was done elsewhere; the three natural stages of man's progress, hunting, tending their flocks, and ploughing the glebe.

We may terminate our remarks upon Opelousas, by pronouncing it deserving in a high degree, the eulogy pronounced in the motto to this work upon all Louisiana.

Parish of Rapides.

Bounded south by Opelousas, S. E. by Avoyelles and Concordia, N. E. by Ocatahoolu, north by Ouachitta, and N. W. by Natchitoches.

This is, as far as excellent soil and timber can render a country valuable, one of the best tracts in Louisiana. There is no doubt but the greatest area of productive land, compared with the whole surface that can be found in the state, exists in the parish of Rapides.

This parish presents three distinct portions of land. On the S. W. the continuation of the pine woods of Opelousas; on the N. E. another pine region commences; the centre is occupied by the alluviatic banks of Red river and its connecting waters.

Should sugar cane succeed upon Red river, the parish of Rapides will contain immense farms of that

valuable plant. The Bayou Robert and Bayou Boeuf are perfectly similar to the soil of the banks of Teche.

The natural timber of this alluvial tract consists of—*quercus tinctoria*, *quercus falcata*, *quercus phellos*, *liriodendrum tulipifera*, *juglans nigra*, *juglans porcina*, *liquidambar styraciflua*, *fraxinus tomentosa*, *gleditsia triacanthos*, *laurus sassafras*, *ilex opaca*, *morus rubra*, *tilia pubescens*, *plantanus occidentalis*, *populus angulata*, *magnolia grandiflora*, *ulmus americana*, *ulmus rubra*, *salix nigra*, *acer rubrum*, *nyssa sylvatica*, *diospiros virginiana*, and *fagus sylvestris*.

The dwarf trees are—The *castanea pumila*, *cornus florida*, *cornus alba*, *carpinus ostrya*, *carpinus americana*, *cerasus caroliniana*, and various others.

The pine tracts are similar to those already noticed. The *fagus sylvestris* begins to appear on the northern waters of Opelousas, and decorate the margin of all the streams to the north of that place, which have their sources in the pine forests.

No town except Alexandria on the right bank of Red river, below the rapid, have been formed in the parish of Rapides. This town is a fine thriving little village, and standing at the head of constant boat navigation, is of considerable commercial importance.

The settlements follow on the alluvial lands, the margin of the streams; but on the pine tracts are scattered over the face of the country. The general time

necessary to complete a voyage from Alexandria to New Orleans and to return, is from twenty to thirty days.

The staples of the parish are cotton, lumber, beef, pork, and maize. Cotton and lumber are the principal articles. The lands are well adapted to the former; and the fine streams winding through almost inexhaustible forests facilitate the procuring and transporting the latter.

Natchitoches.

Bounded south by Opelousas, S. W. by Sabine river, N. W. by the province of Texas, north by the Missouri territory, N. E. by Ouachitta, S. E. by Rapides. This immense parish, covering 10,600 square miles, has so many traits of resemblance to Rapides, that as far as natural division, and production are concerned, the description of the former will serve for the latter.

It may be sufficient to observe, that near Natchitoches, in advancing from the gulph, first in a natural state, appear the *robinia pseud acacia*, the *juglans olivaeformis*, (paccan,)* and the *cactus cylindricus*.†

* Where can be considered the peculiar region of the *juglans olivaeformis*, we are unable to determine. The banks of Red river above Natchitoches, those of the Trinity, Brasos à Dios, Rio Colorado of the gulph of Mexico, and their branches; every where present immense quantities of the paccan.

There are two very distinct species of the *robinia*; one a tree of considerable size, the other a shrub, the latter is known by the name of musquito wood.

† See page 17.

On some creeks N. W. of Natchitoches, the acer nigrum is found. On the hills of Saline occur some stems of juniperus virginiana.

The Red river cotton has always been considered amongst the best in Louisiana. Salt is made at the works owned by Mr. Postlethwait* on Saline river, and transported to Natchez, New Orleans, and elsewhere.

The peltries are mostly received in exchange for goods sold to the savages.

The town of Natchitoches stands upon the right bank of Red river, at lat. $31^{\circ} 46'$, is a very thriving village, consisting of about one hundred and fifty houses. Fort Claiborne occupies a pine hill behind the town.

Here is the seat of the Indian agency for the N. W. savages.

The settlements on the alluvion, are upon the banks of the streams, but in the pine woods, are scattered over the country.

The common time necessary to make a voyage from Natchitoches, to and from New Orleans, is from thirty to forty days.

The author of this work found on lake Bistineau, a third species of robinia; a dwarf tree about twenty feet in height, without thorn, we have given it the name of robinia bistineau. We are persuaded this tree is yet a nondescript.

* See page 29.

The N. W. part of the parish remains uninhabited. The most striking features have been noted in our general view.

The same ridge that becomes first perceptible in passing Opelousas and Attacapas, intersects the country between Red and Sabine rivers. There is not any very striking difference to be observed in the country between Natchitoches and Sabine, and that stretching from that town to the N. W. extremity of the parish and state. Some extensive flats covered with *quercus obtusiloba* and *juglans porcina*, occur in traversing the extent between bayou Pierre and Sabine. Many of the hills are timbered with *quercus feruginea*. The land often presents a very sterile aspect. Above the lower part of lake Bistineau and the north boundary of the state, the high hills are almost uniformly clothed with *pinus rigida*, and *quercus feruginea*.

The road from Natchitoches to the warm springs on Ouachitta runs along this sterile region.

The land near the border of the various creeks entering Bistineau, Dacheet, Saline, and the head of Derbane, are of second rate quality; but abounding in excellent springs of water.

Ouachitta.

Bounded west by Natchitoches, north by the territory of Missouri, east by the Mississippi, S. E. by Concordia and Ocatahoolu, and S. W. by the parish of Rapides.

In the general description of Louisiana, so much detail has been given respecting Ouachitta, as to leave little to add in our particular notice of that singular region.

The indigenous forest trees are nearly the same with those of Natchitoches and Rapides. That part of the parish lying west of the Ouachitta river is hilly, and at any great distance from the streams covered with *pinus rigida*. Near the water courses the *fagus sylvestris*, *cornus florida*, and *carpinus americana*, clothe the banks. On the points of hills and high bottoms, the *pinus rigida*, *quercus tinctoria*, *quercus nigra*, and *fagus sylvatica*, are found growing together. This association of trees vegetates upon the best land found between the Red and Ouachitta rivers, beyond the alluvion of either.

The *robinia pseud acacia*, abounds along the banks of the Ouachitta, intermingled with *laurus sassafras*, *juglans squamosa*, *juglans porcina*, *liquidambar styraciflua*, *quercus tinctoria*, *fraxinus tomentosa*, *betula nigra*, *fagus sylvestris*, and the various kinds of *vitis* and *smilax* that enterlace the branches. The overflowed lands are overgrown with *cupressus disticha*, *nyssa aquatica*, *quercus lyrata*, and *quercus phellos*.

East of Ouachitta the alluvial soil is clothed with the same species of timber, found commonly upon similar land in the adjacent parts, which have been already amply described.

The margin of the few small prairies in this parish presents the *pinus rigida*, *quercus tinctoria*, and *liquidambar styraciflua*, as the most abundant timber. The woods thickly interwoven with various kinds of vines.

The residue of the parish has nothing remarkable to distinguish it from the contiguous country.

The settlements in Ouachitta, like those of Rapides and Natchitoches, are of two kinds; those that wind along the streams and prairies, and those west of Ouachitta river, interspersed through the pine woods.

No town or village has yet arisen in the country of Ouachitta that deserves particular notice. Fort Miro is nominal, designating only the site, where a fort was intended by the Spanish government, when in possession of the country.

The staples of Ouachitta, are cotton, tobacco, lumber, and peltries. The general time consumed in going to, and returning from New Orleans, is nearly the same, as from Natchitoches; from thirty to forty days.

In autumn, when the waters are low, Ouachitta river is not navigable for vessels of any size above common canoes.

If sugar can be cultivated on Red river, near Natchitoches, it will certainly grow, within corresponding latitudes on Ouachitta.

Ocatahoolu.

Bounded N. W. and N. by Ouachitta, E. and S. E. by Concordia, S. and S. W. by Rapides.

Nothing of consequence, not noticed in the general remarks, distinguish this parish from that of Ouachitta. Timber, natural divisions, common features, and staples remain the same. There is less good land, compared with the entire surface, in either Ouachitta or Ocatahoolu, than in the parish of Rapides.

Concordia.

Bounded east and south by the Mississippi river, west by Avoyelles, Rapides, and Ocatahoolu, and N. W. by Ouachitta.

When treating of the annual overflow of the Mississippi banks, great part of the interesting matter relative to Concordia, has been anticipated by that detail.

The entire area of this parish is in the alluvial lands; and is either of the first rate quality, or subject to occasional submersion.

The indigenous forest trees are, near the bank of the Mississippi, the *populus angulata*, *platanus occidentalis*, *quercus tinctoria*, *quercus falcata*, *quercus phellos*, *ulmus americana*, *ulmus rubra*, *salix nigra*, *tilia pubescens*, *juglans amara*, *juglans laciniosa*, some

few stems of the *juglans olivaeformis*, and frequently the *castanea pumila*.

At a distance from the rivers, and on land subject to annual inundation, the most common species of timber trees are, *cupressus disticha*, *nyssa aquatica*, *fraxinus americana*, *fraxinus aquatica*, *quercus lyrata*, *diospiros virginiana*, *salix nigra*, *celtis crassifolia*, *juglans amara*, and *juglans aquatica*.

The *arundo gigantea*, and *chamaerops louisiana*, occupy the same kind of soil, and relative position as in other places where those two vegetables are found.

The settlements of this parish, are mostly on the bank of the Mississippi, and the lakes St. Joseph, St. Johns', and Concordia.

The village opposite Natchez, and bearing the same name with the parish, is the only town that has yet arisen in Concordia.

Staples.—Cotton, lumber and maize. The general commerce of this region differs little from that of the opposing parts of the Mississippi territory.

Avoyelles.

Bounded east by Concordia, Red, Mississippi and Atchafalaya rivers, S. W. by Opelousas, west by Rapides, and north by Red river.

This parish is formed by the Avoyelles hill and prairie; and the surrounding alluvion of the Mississippi, Red, and Atchafalaya rivers.

The natural productions are perfectly similar to the adjacent parishes, in analagous situations. There is not in Louisiana, an appearance more striking, than the constrast in rising from the deep overflow of the rivers, to the hills of Avoyelles, and bayou Rouge. In other places the transition is gradual; here the change is instantaneous, from the low lands timbered with *cupressus disticha* and *nyssa aquatica*, to the elevated soil upon which is growing luxuriantly, the *magnolia grandiflora*, *liriodendrum tulipifera*, *quercus tinctoria*, and *ulmus americana*, with an underwood of *cornus florida*, *laurus benzoin*, and *morus scabra*.

The singular stream of Bayou de Glaize winds nearly through the centre of Avoyelles. The banks of this bayou are above inundation, and are covered with *arundo gigantea*. It is these banks that impede the waters of the overflow of Red river, from taking a course towards Opelousas, and turn the current into the Atchafalaya.*

The land upon the De Glaize is excellent, and will admit extensive settlement; but little is however reclaimed, and most of it remains public property.

Settlements, yet made in this parish, are in Avoyelles prairie, and that of the bayou Rouge; the latter

* See page 58.

is however of little consequence, consisting of only eight or ten families. Staples are cotton and lumber.

Point Coupée.

Bounded N. E. by the Mississippi river, west by Atchafalaya, and south by West Baton Rouge.

This is one of the most wealthy and best cultivated settlements on the Mississippi. The inhabitants are fixed upon that river and Fausse Riviere.

In point of soil, timber and other features of its physiognomy, Point Coupée bears a strong resemblance to Concordia; but is less liable to injury from the annual floods.

It is needless to recapitulate the forest trees of this parish; the list would be a mere repetition of those named under the head of Concordia.

The staples of this parish, are cotton, lumber and sugar; the latter yet in very small quantity.

West Baton Rouge.

Bounded north by Point Coupée, east by the Mississippi river, S. E. by bayou Plaquemines, and S. W. by Atchafalaya river.

This parish so completely resembles the preceding, as to render farther observation respecting its natural or artificial productions useless.

In neither of the three last described parishes do any towns or villages exist of consequence sufficient to demand notice in a general work.

New Feliciana.

Bounded North by the Mississippi territory, S. W. by the Mississippi river, South by East Baton Rouge, and S. E. by Amite river.

This parish is certainly one of the most favoured spots in Louisiana. The land is generally good; some is of the first rate, and but little sterile. The water and timber excellent. The natural productions have been noticed in our general view of West Florida.

Cotton, maize, beef, and pork, the principal staples.

Unlike those on the alluvial borders of the rivers, the settlements in this parish are scattered over the country as in the Mississippi territory. The farms are many of them of large extent. Though some other articles are often produced and sent to market, cotton may be viewed as the great staple; it is made here of excellent quality. Few places in southern Louisiana present more desirable objects to allure to settlement, than the country between the Mississippi and Amite rivers.

East Baton Rouge.

Bounded North by Feliciana, East by Amite river,

S. E. by Bayou Iberville, and S. W. by the Mississippi river.

Every object demanding attention in the commerce, agriculture, or natural production of this parish, has been anticipated in our general sketch of West Florida, and in our description of Feliciana. Those two last parishes have an entire sameness in their appearance and improvements.

St. Francisville, below the mouth of Bayou Sara in the former, and Baton Rouge in the latter, are the seats of justice and of the post offices in their respective parishes. Baton Rouge is considerably the most extensive, but is yet of no great size, containing perhaps three hundred inhabitants.

St. Helena.

Bounded North by the Mississippi territory, East by Tangipao river, south by lake Pontchartrain, Pass of Manchac, and lake Maurepas, S. W. and West by Amite river.

Springfield, on a branch of Tickfah river, is the only town in this parish; it would not deserve notice from any other cause, than being a resting place on the road from Madisonville to Natchez.

St. Tammany.

Bounded North by the Mississippi territory, East

by Pearl river, South by lake Pontchartrain, and West by Tangipao river.

For the natural products of those two parishes, we refer to our general notice of West Florida.

Staples—are cotton, neat cattle, beef, pork, hides, tallow, cheese, lumber, tar, pitch, and lime. Many other articles might indeed be enumerated, which are brought to New Orleans market; poultry of all kinds particularly.

Madisonville, opposite to New Orleans, is remarkable, from standing on the best harbour for vessels in lake Pontchartrain. It is here also, that most persons are put on shore, when travelling from New Orleans to Natchez by the route of the lake.

It may be observed in this recapitulation of the parishes of the state of Louisiana, that many objects are omitted; but we have made it our task to present only those features that mark the general character of each place. The impression on the mind must be stronger, when nothing is seen but the bold outlines that compose the physiognomy of a country, and the memory will retain more tenaciously when not distracted by minute detail.

Between the aggregate area of the state, given in pages 12 and 162, and that afforded by the admeasurement of the parishes, a considerable difference in extent will be perceived. In the parochial area are

embraced all the bays and lakes over which the municipal laws of the state of Louisiana operate; whilst in the area given in the table on agriculture, only the super-
perface contained within sea line is estimated.

Respecting the boundaries of the parishes marked on the map, many of them are drawn by analogy; not being defined by law. ⁵⁵As our object was more particularly to give correct information respecting the various features of the country, the mere political or artificial subdivisions were of minor consequence. New parishes will no doubt be formed, as population increases in places yet unpeopled; but the standing objects in nature resting permanent, we trust the descriptions given will long remain accurate.

The partiality we have for the face of our parish may be supposed by necessity, and our only in-
James
and their range more extensive than that of any other
of mankind. Our species are found in all parts
France; and more and more deeply entered the sciences
that the effect of partiality should be to diminish
perhaps no subject ever was more interesting
James

GENERAL OBSERVATIONS

ON THE

CLIMATE OF LOUISIANA.

- “ ——— What makes the nations smile,
- “ Improves their soil, and gives them double suns,
- “ And why they pine beneath the brightest skies,
- “ In nature’s richest lap.”

THOMSON.

THE subject of the salubrity of the climate of Lower Louisiana, in consequence of the almost universal, but partial prepossession respecting its unhealthiness ; is entered upon with considerable solicitude.

Perhaps no subject ever was more misunderstood than the effect of particular climates on the human frame ; and none can more deeply interest the faculties of mankind. Our species are prone to migrate, and their range more extensive than that of any other animal.

The partiality we have for the place of our birth may be superceded by necessity ; and curiosity incite

us to wander beyond its narrow precincts;—the ice of Spitzbergen and the heats of the coast of Africa or East India Islands, have alike failed to awe mankind; dangers, however formidable, have been braved by men influenced by the love of novelty, or the more ardent desire of wealth. But from a proneness to consider the place of our nativity in a favorable light, we are apt, both in a moral and physical view, to exaggerate the effects of climate. The terms north and south, though merely relative, have the most unbounded influence on our opinions.

The inhabitants of Petersburg and Moscow have the same ideas respecting the Taurida, that the people of Boston and New York have of Lower Louisiana. The opinion has universally prevailed, that the intermediate space between any given spot and the tropics, was more destructive to life, proportionate to polar distance; and it may be observed that this prepossession has been too lasting and general to be unfounded in fact; but may it not be rationally replied, that the appearances that excite the fears, and foster love of country, produce the same effect at all times and places.

The facility of raising vegetable and animal nutriment, increases as we approach the equinox; of course the supporting of human existence is rendered more easy near and within the tropics; so that if some powerful restrictions were not opposed to southern migration, we would not find more than four-fifths of mankind north of lat. 30° , as some of the finest

and most favored regions south of that limit are yet wilderness.

A prevailing notion, that a removal from a northern to a southern region is tantamount to an abridgement of the life of the emigrant, prevails every where; but in no place with more currency than in the United States.

Mr. James Tyler composed some years since a large volume upon the plague and yellow fever. In page 482 we find the following: "Every one therefore who comes from a cold to a warm climate, must in some degree have his blood liquified, and in a certain degree rendered more acrimonious than before. This acrimony may undoubtedly be augmented by certain causes, and by none more probably than immoderate drinking of ardent spirits.

"Every one therefore who comes from a cold country to a warm one, especially where the air is also moist, may consider himself as already diseased, at least in comparison of what he was when at home; for the blood is now exposed to a greater degree of heat, and consequently is about to absorb, or rather may be considered as in the act of absorbing more, and consequently, of changing from a thicker to a thinner or more fluid state; the latter being the natural state of the blood in warm countries."

This passage is not quoted on account of its elegance of expression, or the boldness of its assertions,

but as it contains in one view the received opinions respecting southern migration. Whether the blood becomes liquified as a man approaches southward, and if so, whether this liquescent state of the blood super-induces disease, must be left for medical experiment to determine. The drinking of ardent spirits in any climate produces so few benefits, and such an accumulation of evils, that its use cannot be too severely condemned. Alcohol taken into the human system, with all its deleterious and demoralizing consequences, has been in all countries where its use has been tolerated, the parent of the greatest evils that afflict mankind. But respecting ardent spirits, people are misled by attachment to a received opinion, as they frequently are on other subjects; though those potent liquids are sufficiently productive of disorders both bodily and mental, to justify their total prohibition; yet it may be doubted whether many of the most destructive diseases incident to any given place, do not exert their influence without any super-inducing cause from regimen. The plague, the most destructive of all disorders that terminate human existence, has been most prevalent and deadly in countries where abstinence from distilled liquors is a religious precept, enforced by municipal law.

Another and common subject upon which most people detail their old opinions without examination, is climate.

The subject is too serious to admit levity, but it is difficult to refrain from smiling to hear persons al-

most uniformly ascribing the title of northern to the place of their residence, and claiming an exemption from tropical diseases from their positions, and others more northward by using the same rhetoric. The inhabitants of the eastern or New England states condemn Virginia, the Carolinas, and Kentucky for the same reasons that the inhabitants of the latter places pass sentence on Lower Louisiana. The people of Lower Louisiana derive their epidemics from the West Indies, whilst the West Indies as loudly proclaim the importation of their epidemics from Boulané Siané, the coast of Africa, or some other distant and arid region.

The estuaries of large rivers have always been held as the fruitful seats of disease: how far this idea is entitled to credit, remains yet a desideratum, and an inquiry into the truth or falsity of the opinion, will necessarily include all that can or need be said upon the climate of Lower Louisiana.

The Mississippi, flowing from north to south, enters the sea nearly on the same line of latitude with the Nile, the Blue river, and the Euphrates; with the latter river, the Mississippi has many strong points of resemblance.

The Nile flowing from a southern to a northern region, and passing through countries so very dissimilar, has but little similitude to the Mississippi, except the embranchments at the mouth, common to all rivers which derive their waters from a sandy or

loose soil; and singular as it may be, the Nile, though so very unlike, is in conversation always brought in comparison with the Mississippi.

The Nile rises about lat. 12° north, and pursuing nearly a northern course, enters the Mediterranean sea above lat. 32° , winding through a comparative course of upwards of 1,600 miles. Below Abyssinia, or about lat. 18° north, the Nile receives no tributary rivers of any consequence, and flowing in an uninterrupted stream through Nubia and Egypt, branches into a variety of outlets, and falls into the sea like the Mississippi at various points.

Along the west bank interminable wastes of sand extend themselves nearly the whole length of the Nile, and often within a very short distance of the river. The Red sea also stretches parallel to, and near the Nile, leaving an arid waste or strip between them. The isthmus of Suez, that bounds the delta of the Nile on the east, is a desert waste of sand.

The inland parts of Africa are but imperfectly known, but there is reason to believe that the Sahara, or desert, runs from the west of Egypt to the Atlantic ocean. The space between the mouth of the Nile and that of the Euphrates is generally a desert waste, and exhibits plains of sand.

To an unprejudiced observer, it will, from a geographical comparison appear, that the causes of dis-

ease on the Nile are different; the adjacent regions presenting a total contrast to those near the mouth of the Mississippi. What in Asia and Africa are unprolific wastes of sand, are in America, plains covered with the most luxuriant herbage. The prairies of Opelousas and Attacapas, and the still more extensive savannahs to the west of the Mississippi, may be called the American Sahara.

Could the extent between the mouth of the Ohio and that of the Mississippi, and about four hundred miles east and west of the latter river, be comprehended in one view, objects would present themselves in the following order. East of the river, and near its margin, would be seen a long strip of rich land, timbered with various species of oak, hickory, sweet gum, sassafras, poplar, and other trees indicative of a rich soil; the land would be seen broken into hills and dales, some of the vallies with clear excellent water during the whole of the year; others dry, except in time of rain. Along the margin of the river, between the bank and bluffs, a long line of small lakes would present themselves, except where interrupted by the protrusion of a river or the impending bluffs. Advancing east of this rich tract, a line of pine woods of irregular breadth would be seen between the Mississippi and Mobile, gradually sinking into the low lands of that river. The Mobile presents, especially near its mouth, a similar appearance to the Mississippi, and doubtless must produce the same effects on the human system. Turning the eye more southerly, and in the intermediate space between the Mississippi and Mo-

bile, the Amite, Tickfah, Tangipao, Pearl, and Pascagoula rivers, will be seen entering that chain of lakes that wind from the mouth of the Amite to the mouth of the Mobile. The swamps and high pine tracts are woven with inexplicable intricacy in this region, and the view would be confused in the infinite interlocking lagoons that checker the mouths of every river; and the mind could not resist the conviction, that the lakes Pontchartrain, Maurepas, and the Rigollets, at the mouth of Pearl river, were once a prolongation of lake Borgne.

The next object to arrest the view would be the serpentine meanders of the Mississippi, whose banks, now variegated with farms, present the germ of what Louisiana is destined to become; and glancing more to the southward, another intermixture of bayous, lakes, woods, and morasses, would present their infinite variety, until the line of vision would be terminated by the gulph of Mexico. This extensive landscape would present every variety of soil, from the barren pine hills and flats, to the exuberantly rich alluvion of the numerous rivers that wind their streams over the immense canvass.

West of the Mississippi, and near the margin of that river, but little change would be seen; river uniting to river in a thousand mazes; deep forests of cotton wood, willow, elm, maple, and other trees indigenous to a soil of first quality, and admixed with the great cane and palmetto. In this labyrinth, the Atchafalaya, Red river, and Tensaw, would be the

most conspicuous objects in the limits of Lower Louisiana; beyond its limits the Arkansaw, St. Francis, and White rivers, would exhibit similar features. Turning the eye westward, a new and astonishing scene would open: the wide green plains of Attacapas and Opelousas, varied by the irregular chains of woods, narrow and indented, running along the rivers. Beyond those seas of grass, another forest of pine would be seen commencing, and, leaving the Red river on the right, would at a great distance melt into the immense prairies towards the Panis villages.

The Red river, like its great rival the Mississippi, would present an inextricable network of lakes and bayous.

Beyond the Red river, an elongation of the pine woods would be seen extending to Red river on the south, which widening northward, embraces, above lat. 33° , all the intermediate space between Mississippi and Red river, and becomes imperceptibly less in quantity as the view would be swept to the north.

Out of this great forest the Ouachitta would be seen meandering until lost in the delta of the Mississippi. Beyond lat. $34^{\circ} 30'$ the earth would, for the first time in this vast range, be seen elevated into mountains. The Massernes, extending from west to east two hundred miles, may be considered the great natural outline between Lower and Upper Louisiana. Beyond those rugged, though not very elevated mountains, those vast savannahs that occupy so much

of our continent, would be seen variegated and indented by the woods along the rivers; whilst the imagination would be lost in the extensive, and, as it were, shoreless ocean of grass.

This brief, but accurate survey, will show how little the country under review resembles that in the neighborhood of the Nile. The air that breathes over a grassy plain must be charged with particles infinitely less destructive to animal life, than the scorching air of the African desert.

The extremely mild temperature of the climate of Lower Louisiana, and the cold which is much more severe than could be expected below lat. 33° , is a phenomenon that has not yet been satisfactorily accounted for. Vegetable productions are the only decisive marks of climate; these afford ample proof how much more temperate the climate of Lower Louisiana is, than that of similar latitudes on the eastern continent. The orange tree flourishes in Europe above 38° N. lat.* the sugar cane about the same height; neither of those have been yet cultivated with success in America, as high as 32° N. The cotton and other tender plants have frequently been killed by the frost late in April, and again in the latter days of September. The interval between frosts may be called the months of May, June, July, August and September, though instances have occurred in Opelousas,

* In the islands of Hicres, opposite Toulon, in lat. 43° orange trees are cultivated in orchards for the blossoms which are sold to the perfumers of Grasse.

of frost in the latter month. The heat in Fahrenheit's thermometer seldom amounts to 90° , and the medium temperature of well water is 52° of the same instrument.

This extraordinary coolness in a latitude which is so very warm on the eastern continent, it is difficult to account for on any known principle. It will be noted that those observations equally apply to all North America; but does that supercede the necessity of their insertion in this place? Many, though convinced that in Pennsylvania, and other more northern states, they experience the temperature found in Europe in latitude 50° N. and yet believe the shores of the gulph of Mexico as warm as Morocco.

The fact of those boundless regions of open plains, which oppose so few obstacles to the north winds, and the non-existence of any very elevated chain of mountains, whose course is east and west, will open new fields to philosophical inquiry. Causes deserve an explication, that give within six degrees of the tropic of Cancer, a climate attempered to the medium of that found in Europe and western Asia, in lat. 40° . If we except Olonetz and the Ural chains, and the Dofrine Alps, between Sweden and Norway, all the great ranges of the eastern continent, run in lines not greatly inclined to east and west. The Pyrenees, the Alps, Carpathian mountains and Haemus in southern Europe, the vast Caucasian, Altaian and Thibetian chains in Asia, and the Atlas in Africa, are each strong elucidations of the assumed position. The

mountains of America are remarkably the contrast of those in the east. The Andes, and the chain that divides the waters that flow south-eastward into the gulph of Mexico, or N. E. into Hudson's bay, from those that run westward into the Pacific ocean, and the Allegheny, all wind (if we except the latter,) but little inclined to north and south. It will be seen however that the small inclination of the North American mountains, from a meridian line, tend to confine the winds towards the gulph of Mexico. The Allegheny and the Missouri range, open upon each other at an angle of about 60° . This circumstance carries the wind as it were into the vortex of a funnel.

The above facts are stated as found in nature, without comment; the mind of the reader is left to form conclusions upon the data.

To the west of Louisiana, the province of Texas occurs; the sea shore of the provinces of Texas is perfectly similar to that of Louisiana; a low range of seacoast, much of it marshy; small islands inclosing bays of more or less extent, but in nature and influence on the atmosphere the same. West winds cannot, from the dry open country over which they blow, be loaded with miasma, and those which come from S. W. are innocuous, if we may argue from analogy.

From those external causes, that must ever influence the climate of Louisiana, we now turn to a review of the internal parts, which must have a still more constant and universal influence, than causes that merely affect the great change in the atmosphere.

How far deleterious miasma can be conveyed by winds, has never yet been clearly ascertained, but the fact must be admitted, that foul air arises from some foreign substance uniting itself to the common air and rendering it more dense. The poison in such case only seeks a medium of conveyance, and gradually subsides by its own weight. There is good reason to believe that diseases that owe their origin to the atmosphere derive their existence from causes that influence that element, at or very near the place of residence of the patient.

The stagnant state of water has ever been considered as the fruitful source of disease. Admitting the fact, the causes that lead to the effect remain next to be explained. The deadly effluvia that imperceptibly arises from water in a stagnant state, must come from the putrefaction of animal and vegetable matter. Pure water when confined in hogsheads, or in ships performing long voyages over tropical regions, is innocuous.

We shall now take a brief survey of the state of water throughout the year, in Lower Louisiana.

The spring floods occasioned by the waters of the Mississippi, and Red river, depend for their commencement, elevation, and duration, upon the seasons far north of the delta of the Mississippi. In common years, the rise begins about the first of March, and encreases rapidly until the river's bed, glutted, throws the superfluous water through innumera-

ble channels, into the back reservoirs. The increase of elevation is then slow, and a diurnal decrement of rise is perceived, arising from the continually increased surface that must be overflowed. The distance of those reservoirs from the principal rivers and their extent, varies greatly in different places from the 33° N. lat. to the sea.

Where the curve of 33° crosses the Mississippi, it is about six miles from the river to bayou Maçon; west of which bayou the high pine woods exhibit themselves, limiting the low ground of the Mississippi to six miles in width. Bayou Maçon derives its source from the pine woods, and from a lake running parallel to the Mississippi, above the 33° . Bayou Maçon pursues a general south course, whilst the Mississippi inclines eastward. Twenty miles south of the 33° , and on the west side, occurs lake Providence. This lake was evidently once a bend of the Mississippi. Out of the south bend of lake Providence issues the Tensaw river. Many outlets occur between the head of the Tensaw, and the mouth of Red river, all of which carry their waters into the Tensaw, Black, or Red river. But few lakes, in the true acceptation of the term, are found. The banks of the river are generally above overflow, and are composed of the most productive soil, gradually sloping back by an inclination, that gives from one-fourth to one and a half miles width, before the plain sinks beneath the surface of high water. Many lakes will be seen marked upon the map, but which are mere dilatations of the rivers.

In this region little or no morass is found, the land commonly called swamp, is merely land below the common level of high water, which is hard, solid, and dry, when the inundation subsides. The soil is in every respect different from marsh or swamp. A remark made by Mr. Noah Webster, in his history of epidemic and pestilential diseases, respecting the Nile, applies to the Mississippi, and perhaps to all large rivers which flow through similar countries.

“Egypt is a fertile country, containing not much marsh; but annually overflowed, and subject to most of the inconveniencies of marshy countries, from the drying of its moist surface in very hot weather.”—The same author continues thus:—

“The banks of the Euphrates and Tigris, are nearly in the same predicament; and Bussora is in Persia, what Cairo is in Egypt.”

A notion has prevailed in the face of truth, that the banks of the Mississippi abound with a great number of lakes, whose waters stagnate throughout the year; the real fact is, that those places condemned to annual submersion, are great part of the year extremely deficient in water. North of Red river, the wide space between the Ouachitta and Mississippi, is either a cane brake along the water courses, or a hard dry stiff surface, when the flood has subsided. East of the river Mississippi, and immediately under the bluffs, run a chain of small lakes, fed by numerous springs from the hills, which contain water continually; their

effects on health are experienced by the frequency of bilious complaints in the fall months, in the neighbourhood of those reservoirs. It has been remarked, and there is reason to believe correctly, that the evil effects of stagnant water, extends but a very small distance.

The Red river abounds more with lakes than the the Mississippi; but it has already been remarked, that the Red river lakes are generally mere reservoirs, whose waters rise and subside with the river. Often the same lake, that in April, May, and June, contain ten feet depth of water, presents in the fall season an extensive meadow of succulent herbage. A lake west of Red river, and lying about one and an half mile S. W. by W. of the town of Natchitoches, is an exception to the general remark on the Red river lakes. The lake now under observation is surrounded by pine hills, except the narrow inlet leading to Red river, and is about four miles long and two and an half miles wide; presenting near its surface many decayed cypress trees. The conclusion is irresistible, that the ground occupied by the lake was formerly overflowed in the spring season, and dry on the retiring of the water; but by the high banks that line its outlet to the river falling into the channel, the waters were confined in the bottom; killed the trees, whose stems now present the aspect of an old field, where the dead stumps remain. This fact adds force to another observation made in this work, that no large forest tree can vegetate with its root constantly immersed in water.* The cypress, that appears the child of humi-

dity, dies when surrounded by a body of water, that constantly cover the earth out of which it grows.

The Ocatahoolu, Saline, and Black river lakes, partake of the nature of those along Red river, and the region between Black river and the pine forests, is similar to that between the Ouachitta and the Mississippi river.

Some of the region east of Ouachitta, and south of the 33° N. lat. is covered with pine woods, and are high and dry. All the country on the waters of the Derbane and Ocatahoolu above the lake on the latter, consists of a diversified surface, some pine flats, but mostly broken into hills and vallies, with many streams of excellent water. The timber is generally short leaved pine,* and different species of oak, intermixed with the dogwood or wild cornelian. The land is dry in the strictest sense of the word; of poor quality. Some of the hills afford masses of loose sand stone, lying parallel to the horizon, and evidently in their primitive position. No metallic productions, except some crude nodules of iron ore, have yet been found. The fossil kingdom in this tract, presents to man that very useful anti-septic, common salt. How much the earth here assumes the curve of a sphere, is seen in the distance that the waters are kept back by the rise of the Mississippi and Red River. The Ouachitta is rendered stagnant for some distance above $32^{\circ} 30'$ N. lat. The Ocatahoolu, above the fork, as high as the road from Ouachitta to Natchitoches.

* *Pinus Rigida.*

From the above survey of the waters north of Red river, it must evidently appear, that there exists but little of the sources of putrid exhalations, that have been generally placed in the tract in question. The fact justifies the theory, the complaints of persons within those limits are generally bilious and not of bad type. Inflammatory and putrid complaints are rare, epidemics or infectious disorders are yet unknown. Chronic and catarrhal cases are not frequent; though instances of the latter will exist in all countries where vicissitudes in the air are frequent and rapid. Rheumatisms and pulmonary cases are very rare, and when they do occur are seldom acute. S. W. of Red river, and between that river and the Sabine, the country is very much the same with that between the Ouachitta and Red rivers. Pine is here perhaps more predominant than on the N. E. side, but the soil and waters are much the same. There is, however, one manifest difference, the line of hills present a bolder front towards the low lands. The back water does not arise above the base of the hills, and the streams that flow out of them, are rapid in their descent, until entered into the low grounds, or alluvial tract. The counties out of which issue the head waters of the Calcasu and Mermentau rivers, with the Bayous Boeuf and Crocodile, are of the description of dry pine woods.

South of Red river, and east of the hills to the Atachafalaya river, the low grounds present an intermixture of bayous and lakes, whose banks are covered with cane and palmetto brakes, surface above annual

overflow. The lakes are much more numerous, and larger than on the opposite side of Red river. It has been noted in the review of Red and Atchafalaya rivers, that a chain of small lakes wind along their right bank, which augment in number and size descending the Atchafalaya. The great lakes east of Attacapas spread themselves over a large surface. All those reservoirs rise and fall with the rivers, but contain water throughout the year. Those lakes are slightly affected by the tides, though their waters are fresh. The Point Coupée island is partly high cane brake land; or open woods and a hard soil subject to annual overflow; but few lakes or marshes occur.

Leaving the rivers and lakes to the north, we find a new region winding along the sea shore; this is the real marsh. The surface of the water is but little influenced in depression or elevation by rains or floods; the tides are but low, not exceeding two feet even when aided by a south wind. It may be strongly suspected, that this marsh is much less influential in the production of disease, than we would at first view be led to expect, though it must be acknowledged, that they are the most powerful causes that effect our climate. Giving credence to the correctness of the general belief in the evil effects arising from the putrefaction of animal matter, an everlasting pestilence ought to range along the gulph of Mexico, and depopulate every spot within its vicinity. The millions of testaceous fish, that annually die and rot on this coast, are numerous beyond all human calculation. The most noisome effluvia must continually arise from such a mass of putridity; yet we find but few des-

tructive consequences arising from a cause, that would to all human appearance, carry death on eagle wing. One circumstance may however correct, or lessen the mischief arising from the marshes opposite the state of Louisiana, the small comparative quantity of vegetable substances, that are decomposed in their waters. The marsh in question, is in fact but a part of a border, that winds round the coast of North America, from the coast of New Jersey to Cape Delgado; with but very partial interruptions. We will here quote some observations made on this subject by Mr. Webster, in which good sense and humanity, contend for pre-eminence. His observations will serve to shew, that whatever evils may result from fens, or marshes, they are not monopolized by Louisiana.

“ Most of the coast of South America, from Carthagena to the Oronoke, is bordered with marsh, and is every where sickly.” Mr. Webster has added the same description from Carthagena to the Rio Grande, with but little variation; he continues:—

“ But what shall we say to the marsh on our own shore? The low swampy lands that border all the rivers in the flat country of Maryland, Virginia, and the Carolinas, and the immense tract of bog in Virginia, called the dismal? The effects of them on the neighboring inhabitants are well known—annual and almost universal intermittents, and often remittents.”

“ Is it not possible and probable, that the noxious exhalations from these vast hot beds of putrefaction,

are borne on the southwesterly winds, which prevail almost constantly in June, July, and August, and which run parallel with the general tending of the coast, from Florida to New York? Do they not impregnate the whole atmosphere, for a considerable breadth, and sweep the country from the eastern shore of the Chesapeake, to Philadelphia, New Jersey, and in slighter degree to New York? I do not give a positive opinion on this subject; but the annual prevalence of slight intermittents on York Island, and in the city, though far removed from any marsh, and ventilated by sea breezes, as well as washed by rapid tides, affords some ground to believe this suggestion.

“It is confirmatory of this idea, that soon after leaving York Island towards the east, all intermittents disappear, unless in a very few places, where they proceed from obvious local causes. Now it must be observed, that the coast of the United States, runs generally from south-west to north-east; but at New York, it takes a different course, and runs about east by north, for two hundred miles. This course soon carries the people on the shore, beyond the reach of the supposed stream of morbid vapor, from the southern marshes, whose course is with the south-westerly winds.

“I am not attached to this idea; but it is in conformity with the opinion of the insalubrity of the Euxine winds, at Constantinople, and with the effects of the southerly Calabrian winds, blowing over the Pontine marshes towards Rome. Lancisius relates a

remarkable fact. Thirty gentlemen and ladies went on a party of pleasure towards the mouth of the Tiber. The wind shifted suddenly, and blew from the marshes. "Paludes Ostienses" and twenty-nine of them were immediately seized with a tertian. If such was the effect of the vapors from those marshes, we may suppose the vast Pontine marsh, would poison the air to a much greater distance.

"That the extensive morasses along our southern shore, are pregnant with mischief to that country is certain; that the people of Philadelphia, and New York, are affected by them is possible. It would therefore deserve consideration, whether the evil will not admit of a remedy. There are two modes of rendering marshy lands, and stagnating waters salubrious; one by draining the lands, and cultivating them. The other, by turning into them streams of running water. It is probable that most of the marsh, at the southward, being within reach of tides, and below high water is incapable of being drained. It is the Pontine region of North America. How far the second plan can be applied with success, I have not the local knowledge of the land and rivers to determine,

"The classic reader will recollect the instance related in the history of Empedocles, the Sicilian philosopher and poet, who put an end to pestilential diseases among the Salacentii, by turning two streams of good water into the marshes from which they originated.

“ If there is a possibility of drying any of the lands now covered with poison, or of putting the dead water into motion, the United States have a vast interest in effecting that object ; and expenses are not to be put in competition with the health and lives of our citizens.

“ The same remark is applicable to all the marshes in other parts of the country, as about some of the lakes ; and to all smaller sources of disease, swamps and ponds. In every possible situation, when stagnant water contains vegetable substances in abundance, diseases must prevail. Running water on the other hand, is salubrious. It not only does not exhale morbid air, but it generates fresh and pure air ; at the same time it creates a gentle breeze, by its current which helps to dissipate any noxious particles in its neighborhood, which may arise from other sources.

“ People in the country cannot be too careful, in selecting a spot for their habitation. The question of continued health, or disease, of long life, or premature death, hangs very often upon the choice of a salubrious situation for a house. A farmer should never plant his dwelling by the side of a marsh. Whatever may be the situation of his land, he is inexcusable, if he builds his mansion within a mile of the sources of disease and death. Better for him to go a mile and a half to his daily labor, enjoying robust health, than to live within the circulation of poisonous vapors, afflicted by diseases, for three months in the year. And when a farmer has the misfortune to be

obliged to labour occasionally, in the vicinity of stagnant water, he should be careful not to enter upon the ground early in the morning, before the noxious vapours have been raised, and attenuated by the heat of the sun; nor should he continue there late in the evening.

“ People in the country should select hilly, or elevated situations for their houses, where the surface of the earth is dry, and there is a free circulation of pure air. There is another reason, the water on high ground is always better than in low swampy places. Water, in flat lands, stagnates beneath the surface as well as above, but on hills it is in constant motion. Hence, if men expect good water, they must seek for it on mountains, hills, and rising grounds. The Arabian advice is, that houses should be set on high airy places, near fresh water.”

The passages quoted will impressively apply to every place, where lakes, ponds, or other stagnant waters are found. One important circumstance seems to have escaped almost all writers on the subject of atmospheric influence; that persons living in any given place, acquire a constitution of body suitable to their situation. Not properly attending to this fact has led to many fatal conclusions. A judgment formed of any given place, from the health of the old inhabitants, must lead to deductions too favorable. The health enjoyed by emigrants on their first arrival, afford the most decisive data, but the habits of the person, respecting cleanliness, temperance, and pursuits in life,

ought to be brought into view, to render the conclusions clear and indisputable.

Most persons, who have emigrated to Louisiana, have removed from a cooler region, and have been influenced in their removal by views of interest. The far largest portion of emigrants, are men engaged in commercial pursuits, whose business necessarily expose them to the inclemency of the seasons; they generally reside in the climate, the most deleterious months in the year, and are crowded along the Mississippi and a great portion in New Orleans. The lower class generally, and too many, whose education and rank in society ought to give them ideas more correct, are intemperate in every respect. That men, thus circumstanced, and imprudent, should fall victims to disease and death, in an air new to their constitutions, ought never to excite surprize. When men learn to attend to their own preservation, more than to accumulation of money or sensual gratification, many heart-rending sighs, over names dear to the heart, will be spared.

The second class of emigrants; those who remove to Louisiana with an intention of forming permanent settlement, are generally influenced like the first, by motives of pecuniary consideration. Those persons remove almost uniformly in the winter months, enter the country of Lower Louisiana in the spring, when the heats are every moment increasing. Their bodies thus taken from one extreme to another, have every predisposition to contract the diseases natural to their

new situation; and as if a removal instantaneously, from a cold to a warm atmosphere, did not superinduce evils in sufficient abundance; emigrants almost universally choose situations, along the rich margin of some river; commercial facility being the predominant object of the choice. It would be vain to multiply admonitory lessons, for the use of men who consider every thing beneath their notice, that does not lead to their aggrandizement; but we may be permitted to insert some advice, useful to persons who yet believe existence of too high value to sport it away in the mere acquisition of wealth.

Much of the upper part of the state consists of land of second quality, but yet strong enough to produce excellent crops of small grain. Situations may be chosen, far beyond the reach of stagnation, and near the margin of some of the most pellucid streams of water in the world. Fortunes will not, indeed cannot, be accumulated in a few years, but health, the best of all the gifts of nature, will be always in reach. From the mildness and softness of the climate, human existence will be supported with less manual labour than in more rigorous latitudes. It will be seen by the tables attending this work, how vast a mass of human beings can be placed upon the region in question. Persons intending to settle in Louisiana, ought, if possible, to remove in the fall, spend the winter in the country, and in some measure, mature themselves to the climate before the fervid heats of summer.

Bilious complaints, almost uniformly, attack new

comers. These complaints may mostly be prevented or removed without much danger or difficulty. At a distance from towns they are seldom fatal. The influence of cities, on the health of mankind, ought not to be overlooked by the emigrant.

Without swelling this subject to a tedious length, all that might be said on the climate of the state of Louisiana could not be included. It will be sufficient to remark, that persons who remove to the country, from flattering pictures of wealth, laid before them by interested or misinformed persons, have very often, the pain of disappointment, to sharpen the pangs of a sick bed. Though many fortunes of large magnitude have been acquired on the lower parts of the Mississippi, they have not been procured without labour, temperance, and œconomy; habits and virtues that go seldom unrewarded in any place. He who ranges into Louisiana to indulge idleness, will mostly reap the reward of poverty, contempt, and unpitied disease. The man who fixes himself in the country, from rational ideas, and whose expectations are not inflated, will often find his situation agreeable and ameliorated. The lands are mostly superior to much of the surface of other parts of the United States. The winters are shorter, and the ease of supporting animals very much abridge human labour.

A person of large capital, who settles either on that part of the state favourable to the cultivation of cotton or sugar, must, in the lapse of some years, find his property increased, while the danger to his health or

that of his family, will be removed by the same means, that add to his wealth ; exercise, sobriety, and moderation.

It may with safety be concluded, that personal, and domestic cleanliness, has an omnipotent effect on the health, and even the morals of mankind. Decency of person is seldom found in families, without repaying the pains taken to acquire it, a thousand fold. The plague, and other destructive eruptive disorders, are daily becoming less frequent and fatal. This great and beneficial change, has no doubt, in part originated from improved habits of living, in respect to diet and cleanliness. Countries, where those advantages are not enjoyed, are yet most subject to pestilential disorders. When men are taught to remove the external causes of putridity, it is difficult to estimate the result upon the happiness and security of mankind. No doubt the time will come, when a part of the national income will be spent to remove that zone of morbid exhalation, that surrounds so much of our common country—then will health lead civilization

“Thro’ woods, and pathless wilds, and mountain snows.” OVID.

The prevailing wind of Louisiana is from the south, the current of air is from that point, or within a few degrees east or west more than half the year. During a south wind, the sensations of the human body vary with the humidity or dryness of the air. Heat is always the attendant of a south wind, but the effects of the increased warmth is felt with more force if the

air is humid. In the latter case, a weakness and debility is the consequence; but after a dearth, when the air is dry, a south wind produces elasticity and vigor in the human frame.

From the peculiar structure of the coast of North and South America, from Cape Sable to Cape Roque, 5° S. lat. and from the position of the West India islands, from Cape St. Anthony to Tobago, the winds prevailing in Lower Louisiana must be influenced, both in their course and the temperature they produce, by the impending shores, and by the seas and lands over which they sweep.

The trade winds passing continually over the Atlantic Ocean, on the coast of South America meet that continent, for the first time, at Cape St. Roque; then bend in the direction of the mouth of the Mississippi, about N. 53° W. and pursue the curve of the Caribbean sea, near 5000 English miles. This line will have on the N. E. the West India islands, and on the S. W. that immense range of coast that includes the sea shores of the Brazils, Guiana, and Caraccas, with the vast bays of Carthagen, Venezuela, and Triste, in South America, and the coast of Darien, Veragua. Costa Rica, Nicaragua, Honduras, Yucatan, Tobago, Mexico, New Leon, Texas, and Louisiana, with the wide bays of Honduras, Campeachy, and St. Bernard, in North America. Mr. Edwards, in his history of the West Indies, in speaking of the climate of those islands, expresses himself thus:—

“The vernal season or spring, may be said to commence with the month of May, when the foliage of the trees evidently becomes more vivid, and the parched savannahs begin to change their russet hue, even previous to the first periodical rains, which are now generally expected, and generally set in about the middle of the month. These, compared with the autumnal rains, may be said to be gentle showers. They come from the south, and commonly fall every day about noon, and break up with thunder storms; creating a bright and beautiful verdure, and a rapid and luxuriant vegetation. The thermometer at this season varies considerably; commonly falling six or eight degrees immediately after the diurnal rains; its medium height may be stated at 75° .

“After these rains have continued a fortnight, the weather becomes dry, settled, and salutary; and the tropical summer reigns in full glory. Not a cloud is to be perceived, and the sky blazes with irresistible fierceness. For some hours, commonly between seven and ten in the morning, before the setting in of the sea breeze or trade winds, (which at this season *blows from the south east* with great force and regularity, till late in the evening,) the heat is scarcely supportable; but no sooner is the influence felt of this refreshing wind, than all nature revives, and the climate in the shade becomes not only very tolerable, but pleasant. The thermometer now varies but little in the whole twenty-four hours; its medium near the coast may be stated at about 80° . I have seldom observed it higher than 85° at noon, nor much below 75° at

sunrise. The nights at this season are transcendantly beautiful. The clearness of the heavens, the serenity of the air, and the soft tranquillity in which nature reposes, contribute to harmonize the mind, and produce the most calm and delightful sensations. The moon too in these climates, displays far greater radiance than in Europe; the smallest print is legible by her light; and in the moon's absence, her functionaries are not ill supplied by the brightness of the milky way, and by that glorious planet Venus, which appears here like a little moon, and glitters with so refulgent a beam, as to cast a shade from trees, buildings, and other objects, making full amends for the short stay, and abrupt departure of the crepusculum or twilight.

“ This state of the weather commonly continues with little variation from the beginning of June, until the middle of August, when the diurnal breeze begins to intermit, and the atmosphere becomes sultry, incommodious and suffocating. In the latter end of this month, and most part of September, we look about in vain for coolness and comfort. The thermometer occasionally exceeds 90°, and instead of a steady wind from the sea, there are usually faint breezes and calms alternately. These are preludes to the second or autumnal season.

“ Large towering clouds, fleecy and of a reddish hue, are now seen in the morning, in the quarters of the south and south-east. The tops of the mountains appear at the same time clear of clouds, and the objects upon them wear a blueish cast, and seem much

nearer to the spectator than usual. When these vast accumulations of vapor have arisen to a considerable height in the atmosphere, they commonly move horizontally towards the mountains, proclaiming their progress in deep and rolling thunder, which, reverberated from peak to peak, and answered by the distant rolling of the sea, heightens the majesty of the scene, and irresistibly lifts up the mind of the spectator to the great Author of all sublimity.

“The waters however with which these congregated vapors load the atmosphere, seldom fall with great and general force, until the beginning of October. It is then that the heavens pour down cataracts. An European who has not visited these climates, can form no just conception of the quantity of water which deluges the earth at this season; by an exact account which was kept of the perpendicular height of the water which fell in one year in Barbadoes, (and that no ways remarkable) it appeared to have been equal to sixty-seven inches.

“It is now (in the interval between the beginning of August, and the latter end of October,) that hurricanes, those dreadful visitations of the Almighty are apprehended. The prognostics of these elementary conflicts, have been minutely described by various writers, and their effects are known by late mournful experience, to every inhabitant of every island within the tropics, but their immediate cause seems to lie far beyond the limits of our circumscribed knowledge,

“Towards the end of November, or sometimes not until the middle of December, a considerable change in the temperature of the air is perceivable. The coasts to the northward are now beaten by a rough and heavy sea, roaring with incessant noise; the wind varies from the east to the north-east, and north, sometimes driving before it across the highest mountains, not only heavy rains, but hail; till at length the north wind having acquired sufficient force, the atmosphere is cleared, and now comes on a succession of serene and pleasant weather; the north-east and northerly winds spreading coolness and delight throughout the whole of this burning region.”

From the foregoing description of the climate and seasons of the West Indies, any person long acquainted with the country, would be surprized at the similarity of the seasons in these islands and those of the northern shore of the gulph of Mexico, with the exception of a month in the general changes.

The seasons of the state of Louisiana, admits of the Boreal division of Spring, Summer, Autumn and Winter. The approach of Spring is announced in the month of March by an almost continual south wind, which gradually superinduces warmth and vegetation, often attended with very heavy rains, and sometimes by chilling north and north-west winds, which latter end in clear serene weather, which is succeeded by a return of south wind and rain. The month of April is generally ushered in by an increase of southern winds and heat; vegetation is extremely rapid, though

sometimes frost has been known in this month, sufficiently severe to kill the cotton and other tender herbs. The peach tree now beautifies the farms with its elegant purple blossoms, the forests gradually assume their full foliage, the birds enliven the woods with their notes, particularly the mockbird, which, courting the society of man, perches himself on some spray near the houses, continuing through the night his varied notes. The prairies are clothed in the garb of most verdant hue, while the forests are decked with the sanguine teint of the red bud, and the virgin white of the wild cornelian flower. The month of April in these regions is in reality, the representative of the May of the higher northern countries; it is the season of gaiety and renovation, throughout all nature. Enough of the coolness of winter remains to give an agreeable freshness to the air.

Before the beginning of May, in common seasons, the force, frequency, and regularity of the south winds has ceased, dry weather commences.* The heats of summer now encrease rapidly, vegetation is vigorous, though often checked for want of rain. The month of June differs but little from May, except in increase of heat.

It was a remark made by the late Mr. Dunbar of Natchez, that the wind during the day in Louisiana,

* This observation, though just on an aggregate of several years, admits of some remarkable exceptions. The great rain in the Spring of 1804, was on the 4th day of May. This pluvial deluge, seemed in quantity and time beyond the limit of human calculation.

almost uniformly in the summer months, blows about 3° behind the sun, keeping that distance throughout the day. The wind commences with the rising of that luminary.

The nights are uniformly temperate. It is a fact that the oven-like heat often experienced in high northern latitudes, in the summer evenings, is unknown in Louisiana.

With the month of July showers commence, often attended with very loud thunder. Sometimes the rains are excessive. The fig, which ripens in this month, is almost annually injured by wet weather. The heat of the sun, now in full force, is often extremely oppressive.

The musquito, that animal, of which so much has been said, now presents in the swamps and woods, adjacent to lakes or marshes, its millions: This troublesome little insect, is so constantly found most numerous near wet places, and where the now retiring floods have left the earth in a damp state, that we have often been tempted to believe it a vigilant sentinel placed by nature at the portals of disease, to warn man to beware. The musquito is certainly, of all the works of the creation, endowed with life and motion the most eternally active; its voracious appetite keeps it ever on the wing; every pond is its native bed; every leaf in the swamps its dwelling; and the blood of all animals through whose skin it can pierce its fine attenuated proboscis, its food.—

The never ceasing hum of these creatures, awakens in the mind of the person exposed to their bite, the most disagreeable sensations :—they are the insect hydra ; destroy them by hundreds, other hundreds succeed. Nothing but flight from their abodes, or a curtain that bars their attacks, will defend the traveller from their cruel ferocity. But, notwithstanding what is said of the musquito, it is much less injurious than has been represented, and certainly produces beneficial consequences, by obliging men to avoid, low, damp, marshy land in summer. Early in the morning, and in the evening, the musquito is most active, times when the miasma of those places is most dangerous. It might be perhaps with propriety considered, a not defective method to estimate the general health of any given place, by the quantity of these musquitoes. Authors of credit have contended, that the abundance of noxious insects, such as locusts and musquitoes, indicate a state of air injurious to the health of warm blooded animals, particularly man, and quadrupeds. That this idea is not unfounded in fact, there are many reasons to conclude. The present year, 1811, is remarkable for the great numbers of the musquito, for the prevalence, with an unusual degree of violence, of bilious complaints, and the existence of the yellow fever in New Orleans. When the months of June and July usher uncommon quantities of these creatures, it would be prudent to prepare for approaching danger in the three ensuing months.

It is certainly one of Nature's hidden mysteries, why locusts, flies, musquitoes, and other animals, of

the insect tribes, should so immeasurably differ in quantity in succeeding seasons. No reason has yet been adduced to account for this fact, a fact far too little attended to by naturalists. Experience has too clearly established the union between uncommon production of those animals, and a state of air productive of sickness and death to man, to permit scepticism to doubt the truth. After all our deep researches into the works of nature, how many of her most important secrets are yet concealed from our knowledge? Too often has learning and industry been exhausted on trifles, whilst subjects upon which depend the welfare of millions have been neglected.

Reviewing the climate of Louisiana, a circumstance claiming most serious attention, is the facilities or impediments that nature affords or opposes to invading armies, likewise the probabilities of health or sickness to United States' troops stationed in the country. The received opinion, that northern armies will of course prevail, against those from more southern regions, is unsupported by the general tenor of history. The destruction of the Roman empire by the hordes of northern Europe, stand contrasted with the conquests made by the Egyptians and Saracens from the south. It ought to be recollected, that the Roman empire rose in a comparative soft and voluptuous climate, to that of many of its vast provinces in Europe and Asia; and that its decadence arose from other causes, and had but little dependance upon the position of its capital. In addition to the debilitating influence of heat upon human morals, it is currently believed to produce a want of energy approaching to

cowardice. "Notwithstanding such was the corruption of Rome," says Montesquieu, "all misfortunes were not introduced, because, such was the force of her institutions, that she had preserved an heroic valour, and all her application to the art of war, amidst wealth, effeminacy, and voluptuousness; more than I believe ever has been the case with any other nation of the world."* The example of Rome may be cited in this place with the more propriety, from its resemblance respecting atmospheric temperature to Louisiana. How far the climate of the former place has changed in the last nineteen hundred years, is a disputed subject; but arguing from its local position, the deduction is rational, that except the influence of human labor in first draining the Pontine marshes, and of human neglect in suffering those fens again to stagnate; no great change has been effected. It may then be fairly concluded, that if the health of men can be preserved, and the love of country and military pride fostered by civil liberty, no great apprehension need be entertained of the deterioration of the energies of mind or action in Louisiana. No axiom admits of more demonstrative solution than that every thing else equal, an army composed of the natives of any place, or of men seasoned to the climate, has numerous advantages over an invading force. This fact was on many occasions proved in the American revolutionary war, by the United States' militia, fatiguing, harassing, and destroying the British regular armies. The great veteran army of nearly 40,000

* Grandeur et décadence des Romains, chap. x, page 108.

men, sent by France to St. Domingo, against the most miserable race that ever pretended to self government, evinced how efficient an ally climate is on the side of native troops. The elements will always range themselves on the part of men they have fostered.

A history of the expeditions made to this continent during the last 90 years, by the nations of Europe, affords a melancholy picture of human crimes and folly; at once outraging humanity and prudence. Hosier's expedition to Porto Bello, in 1726; Vernon and Wentworth, to Carthagen, in 1741; the French expedition to St. Domingo in 1801; and the great British army that invaded Louisiana in 1814, have exhibited merely the most prominent scenes in this lengthened tragedy. It is thus that ignorance and ambition sport with life and happiness. Every evil is however productive of benefit to man; the pale spectre of disease that appals the invader, assists the native to defend his rights, his home, his wife, and his children. What could never be effected by the admonitions of pity, the demands of justice, or the maxims of policy, is effected by the atmosphere. Man, that in the intoxications of success, or the allurements of ambition, is deaf to every cry but that of contending hosts, is reclaimed or restrained by the immutable laws of the universe. His unprincipled schemes of conquest, robbery, and murder, are repressed and revenged by an arm, opposed to whom all human strength is weakness.

In an enquiry into the influence of the climate of Louisiana upon the health of the inhabitants, to complete the investigation, it will be necessary to establish its effects also upon the mental faculties of persons born within the sphere of its influence. This section we enter upon with a feeling of pleasure. The people of the United States will receive with equal satisfaction, a detail, that when admitted as correct, must lessen the prejudices that accident and design have engendered to widen the moral distance between them and their fellow citizens in Louisiana. To an ingenuous mind, nothing administers more solid gratification, than to find man more amiable than expected. The noble enjoyment arising from the exchange of sentiment between enlightened minds, is one of the greatest privileges that reason has accorded to man. To open new sources of this sublime fruition, is conferring a benefit on human nature.*

* European animals, in general, degenerate in the West Indies; and as they descend in a few generations, retain but little resemblance of the original stock. How far this extends to the human race, as relative to natural endowments, is a subject of nice enquiry, and foreign to my present pursuit. However, if any inferiority be found at all, it does not appear in the first generation, or in those born immediately of European parents. But on the contrary, if my observation be just, in people of this description, there is equal capacity and stability of mind, with more acumen than in those born in Europe. Whether this diminishes or not, in further removes without European mixture, abstracted from the influence of habit and education, may admit of speculation. But let the change be how, or what it may, I have never observed any declension in the qualities of the heart, nor in the tendency of the mind, that philosophy could fairly attribute to nature. The women are generous, affectionate, industrious, and virtuous. The men are brave, polite, and ingenious; and have a peculiar turn for the acquirement of belles lettres, and the elements of arts that are not laborious. Powerful as the dominion of passion and impatience is, indolence must prevail where per-

The character of the Creole of Louisiana may be drawn in few words. Endowed with quick percep-

petual sameness of the season blunts the edge of energy, and where climate relaxes the muscular fibres, and debilitates the nerves. European dogs lose their scent, horses their speed, and human beings, of delicate structure and fine feelings, sink into a wearisome existence, deprived of power and inclination to move. But there are different casts of human beings, as well as other animals. Men, generated from the coarser materials of northern melancholic matter, who on their native soil were intended to vegetate, labour, and die, often acquire an expansion of soul, removed to warmer climates. They ripen in the sun. They get ideas in spight of nature. It is not uncommon between the tropics to see contention for precedency; duel from punctilio, and the laws of honor obstinately insisted upon by men, who, but a few years before, were imported from Europe to fulfil some servile office, in which they acted with ignorance and integrity, until the sun had sublimed their stupidity and dissolved their principles.

Dr. Mosely, on the climate of the West Indies, page 103.

Mr. Edwards, speaking of the Creoles of the West Indies, has drawn a picture, that every attentive observer must acknowledge a striking likeness of the Creoles of Louisiana. With the difference of climate, and political governments under which the respective parties were brought to maturity, we are confident there is much similarity between the West Indians and Creoles of Louisiana.

“Perhaps the circumstance,” says Mr. Edwards, “most distinguishable in the character of the natives to which the climate seems to contribute, is the early display of the mental powers in young children; whose quick perception, and rapid advances in knowledge, exceed those of European infants of the same age, in a degree that is perfectly unaccountable and astonishing. This circumstance is indeed too striking to have escaped the notice of any one writer who has visited the tropical regions of America; and the fact being too well established to be denied, the philosophers of Europe have consoled themselves with an idea, that, as the young West Indians attain sooner to maturity, they decline more rapidly than Europeans. Nature is supposed to act in this case in a manner analogous to her operations in the vegetable kingdom, where the trees that come soonest to perfection, are at the same time less firm and durable, than those which require more time for the completion of their growth. It is indeed certain, that the acquirements

tion, his faculties develop themselves at an early age; if found ignorant, it is not the ignorance of stupidity, but arising from an education under circumstances unfavorable to improvement. Open, liberal, and humane, where he is found inhospitable, it is the fruit of a deception he dreads, and to which his unsuspecting nature has led him to be too often the victim. Mild in his deportment to others, he shrinks from contention; a stranger to harshness, his conduct in the pursuits of life is marked by kindness. Legal disputes, that seem to form part of the amusements of the people of some other parts of the world, are instinctively avoided by the Creole. His docility and honesty secure him from injuring others, and he enters the temple of

of the mind in the natives, do not always keep pace with its early progress; but the chief cause, (as Uloa hath observed,) of the short duration of such promising beginnings, seems to be the want of proper objects to exercise the faculties. The propensity also, which the climate undoubtedly encourages, to early and habitual licentiousness, induces a turn of mind and disposition unfriendly to mental improvement. Among such of the natives as have happily escaped the contagion and enervating effects of youthful excesses, men are found of capacities as strong and permanent as among any people whatever; as I cannot, therefore, admit that the Creoles in general possess less capacity and habits of mind than the nations of Europe, much less can I allow that they fall short of them in those qualities of the heart that render man a blessing to all around him. Generosity to each other, and a high degree of compassion and kindness towards their inferiors and dependents, distinguish the Creole in a very honourable manner. If they are proud, their pride is allied to no meanness. Instructed from their infancy to entertain a very high opinion of their own consequence, they are cautious of doing any act which may lessen the consciousness of their proper dignity. From the same cause they scorn every species of concealment. They have a frankness of disposition beyond any people on earth. Their confidence is unlimited and entire. Superior to falsehood themselves, they suspect it not in others."

justice with reluctance to demand reparation for his own wrongs. Sober and temperate in his pleasures, he is seldom the victim of acute or chronic disease. His complexion, pale but not cadaverous, bespeaks health, if not a vigorous frame. His strongly speaking eye, beams the native lustre of a mind, that only demands opportunity and object to develop all that is noble and useful to mankind. If the Creole of Louisiana feel but little of a military spirit, this apathy proceeds not from timidity; his ardent mind, light athletic frame of body, active, indefatigable, and docile, would render him well qualified to perform military duty, should this part of his character ever be called into action.* The peal of national glory was never rung in his youthful ear. One generation has arisen since Spain held his country and noble was the germ that retained its fructifying power, under the blighting influence of that government.† Louisiana has escaped the galling and torpid yoke; its inhabitants will share the genius and freedom of the empire in which they are incorporated.

The cordiality with which the Louisianians hailed their introduction into the U. States government, has

* This part of the work was composed at Opelousas, and read to several persons, in the month of October, 1811. How far the author estimated correctly the character of the Creoles, and the consequences of invading Louisiana, intermediate events have amply explained.

† It is happy for them that God should have permitted the existence of Turks or Spaniards, the two nations best calculated to possess uselessly a great Empire.—*Grandeur and Decline of the Romans, chap. xii. p. 275. MONTESQUIEU.*

received a check from the misconduct of too many Americans. The moment the change was effected, an host of needy adventurers, allured by the softness of the climate, the hopes of gain, and inflated by extravagant expectations, spread themselves along the Mississippi. Many men of candid minds, classical education, and useful professional endowments, have removed and settled in Louisiana; but some without education or moral principle, prejudiced against the people as a nation whom they came to abuse and reside amongst. Too ignorant to acquire the language of the country, or to appreciate the qualities of the people, this class of men have engendered most of the hatred existing between the two nations that inhabit Louisiana. The evil of national animosity will gradually subside, as a more numerous and orderly race of people become the improvers of the public lands.

The dark side of the Creole character may be considered impatience of temper, and a propensity to licentiousness when in the possession of wealth.

Mr. Bryan Edwards, in drawing the character of the West Indians, imputes their early propensity to licentiousness to the climate. We may wonder why so accurate an observer should impute the evil to climate, when the cause was so obvious. The real fact is, that the slavery of the negroes constitutes the demoralizing principle, if it exists, that debauches the mind and body.

Copying from Montesquieu and not from observation of nature, climate has been called upon to account for stains on the human character, imprinted by the hand of political mistake. No country where negro slavery is established, but must bear in part the wounds inflicted on nature and justice. Where the first lesson taught men is their own consequence, and the degraded state of beings born to administer to their passion, is every moment present to their eyes, men may be proudly jealous of their own freedom; may maintain it with vigour; but, in despite of the most virtuous precepts, seducing examples must weaken the moral principle in the hearts of too many. "The slavery of some part of the human species," says Mr. Edwards, "in a very abject degree, has existed in all ages of the world, among the most civilized as well as the most barbarous nations." And that, "perhaps like pain, poverty, sickness and sorrow, and all the various other calamities of our condition; it may have been originally interwoven into the constitution of the world, for purposes inscrutable to man."*

Without pursuing a train of metaphysical reasoning on the subject, we may at once draw this induction; that if slavery, like pain, is one of the laws of existence, the latter does not more certainly produce physical weakness, debility, and death, than does the former lessen the purity of virtue in the human breast.

The author last quoted, in another part of his works, has most justly accounted for the licentiousness of

* Vol. 2d, B. IV, page 138.

not only the people of the West India islands, but of all others, similarly situated. This subject is too painful and delicate to enlarge on: we would not have touched the theme, if it had not been to obviate a too general idea; that the moral sense in the human breast, becomes lower on advancing southward, and that a scale of virtue might be formed on the reverse principles of a thermometer.

I have reserved to close the subject, the examination of that part of the human species, that, in every civilized region of the earth, in all ages have most deeply influenced the character of man.

The women of Louisiana are, with few exceptions, well formed, with a dark piercing eye. Their movements bespeak warmth of imagination, and a high flow of animal spirits, whilst their features indicate good nature and intelligence. Tender, affectionate, and chaste, but few instances of connubial infidelity arise from the soft sex. With too often example to excuse and neglect to stimulate, the most sacred of human contracts are fulfilled on their parts with a fidelity, that does honor to their sex. In all parts of the earth, and in all ranks of society, women are more virtuous than men. From some cause that operates every where, the moral sense is more deeply felt, and more uniformly obeyed by women than by men: more temperate in their enjoyments; their passions are more under the guidance of reason; decent in their deportment, they continually counteract the predisposition in man to vulgar sensuality.

As wives, sisters, or mothers, the Creole women hold a rank far above their apparent means of education. Frugal in the expenses of life, they seldom lead their families into distress, by gratifying their pleasures or pride. Rigid economy, that may be called a trait in the Creole character, is much the most prominent in the conduct of women. Very seldom the victims of inordinate desires in any respect, their dress is regulated by neatness, decency, and frugality.

That this picture is neither the effect of a warm imagination that delights in clothing objects in false colors, or that of flattery, will be admitted by generous, candid and observing men of all nations, who have had the honor to possess the only means of forming a judgment—converse and acquaintance with the objects of the inquiry. If the women of Louisiana are found deficient in mental endowment, the reason is obvious: want of the means of acquirement. But the minds of the Creole women, remarkably active and tenacious, are much less ignorant than is generally supposed. Should a taste for reading be infused into society, if a judgment can be formed by the strength of mind, intuitive perception, and clear discrimination evinced by the fair of Louisiana, their rank in the scale of intelligence will be respectable, if not exalted.

At this moment, politeness, ease, hospitality to strangers, tenderness to their relatives, and indulgence to their slaves, attended by a mild unobtrusive decency of deportment, mark the conduct of the Creole

women. Exceptions may be found, but the general outline is just.

If climate operates extensively upon the actions of human beings, it is principally their amusements that are regulated by the proximity to the tropics. Dancing might be called the principal amusement of both sexes in Louisiana. Beholding the airy sweep of a Creole dance, the length of time that an assembly will persevere in the sport, at any season of the year, cold or warm, indolence would be the last charge that candor would lodge against the people. All ages on the approach of a ball, seem to feel the warmth of youth; the bloom of fifteen, and the apparent decrepitude of sixty, evince alike animation.

VOCABULARY

OF

TERMS USED IN THIS WORK.

<i>Acer rubrum,</i>	. . . . .	Red Flowering maple.
<i>Acer nigrum,</i>	. . . . .	Black sugar maple.
<i>Acer negundo,</i>	. . . . .	Box elder.
<i>Amygdalus persica,</i>	. . . . .	Peach.
<i>Andromeda racemosa,</i>	. . . . .	Red lead.
<i>Annona triloba,</i>	. . . . .	Papaw.*
<i>Arundo gigantea,</i>	. . . . .	Large cane.
<i>Betula lenta,</i>	. . . . .	Black birch.
<i>Bignonia catalpa,</i>	. . . . .	Catalpa.
<i>Bayou,</i>	—This word, originally Spanish, signifies the diminutive of bay—but in Louisiana the term is synonymous with our word creek, and consequently becomes the diminutive of river.	
<i>Cactus cylindricus,</i>	. . . . .	Prickly pear.
<i>Carpinus ostrya,</i>	. . . . .	Iron wood.
<i>Carpinus americana,</i>	. . . . .	Horn beam,
<i>Castanea pumila,</i>	. . . . .	Chincapin.
<i>Celtis crassifolia,</i>	. . . . .	Blackberry.
<i>Cerasus caroliniana,</i>	. . . . .	Laurier almond.
<i>Cerasus virginiana,</i>	. . . . .	Wild cherry.

* Omitted in the text, though plentiful in the eastern part of the settlements of Opelousas, and the adjacent parts.

VOCABULARY.

<i>Chamaerops louisiana,</i>	. . . . .	Palmetto, or latania.
<i>Citrus aurantium,</i>	. . . . .	Sweet orange.
<i>Cornus florida,</i>	. . . . .	Dogwood.
<i>Cornus alba,</i>	. . . . .	Swamp dogwood.
<i>Crevasse,</i>	—from the French verb crever, to burst.	
<i>Cupressus disticha,</i>	. . . . .	Cypress.
<i>Diospiros virginiana,</i>	. . . . .	Persimon.
<i>Fagus sylvestris,</i>	. . . . .	Beech.
<i>Fraxinus tomentosa,</i>	. . . . .	Red ash.
<i>Fraxinus aquatica,</i>	. . . . .	Water ash.
<i>Gleditsia monosperma,</i>	. . . . .	Water locust.
<i>Gleditsia triacanthos,</i>	. . . . .	Honey locust.
<i>Ilex opaca,</i>	. . . . .	Holly.
<i>Juglans cathartica,</i>	. . . . .	Butternut.
<i>Juglans amara,</i>	. . . . .	Bitternut hickory.
<i>Juglans aquatica,</i>	. . . . .	Swamp hickory.
<i>Juglans laciniosa,</i>	. . . . .	Thick shell-bark hickory.
<i>Juglans myristicæformis,*</i>	Nutmeg hickory.
<i>Juglans nigra,</i>	. . . . .	Black walnut.
<i>Juglans porcina,</i>	. . . . .	Pignut hickory.
<i>Juglans squamosa,</i>	. . . . .	Shellbark hickory.
<i>Juniperus virginiana,</i>	. . . . .	Red cedar.
<i>Laurus sassafras,</i>	. . . . .	Sassafras.
<i>Laurus benzoin,</i>	. . . . .	Spicewood.
<i>Laurus carolinensis,</i>	. . . . .	Red bay
<i>Levee,</i>	—large ridge of earth thrown up along the banks to confine the waters in the bed of the Mississippi,	
<i>Liquidambar styraciflua,</i>	. . . . .	Sweet gum.
<i>Liriodendrum tulipifera,</i>	. . . . .	Poplar.
<i>Magnolia glauca,</i>	. . . . .	White bay.
<i>Magnolia grandiflora,</i>	. . . . .	Large laurel.

* Michaux, in his incomparable work on American trees, has, we believe, given, for the first time, the nutmeg hickory a place in natural history. This tree grows usually along the slopes of hills in rich land; and is plentiful on the bluffs in western parts of the Mississippi territory, and in all the broken fertile country west of Atchafalaya.

VOCABULARY.

<i>Morus rubra</i>	Mulberry.
<i>Morus scabra</i> ,	Spanish mulberry.
<i>Muriate of Soda</i> .	Common culinary salt.
<i>Nyssa aquatica</i> ,	Tupeloo.
<i>Nyssa sylvatica</i> ,	Black gum.
<i>Pavia lutea</i> ,	Buckeye.*
<i>Pinus rigida</i> ,	Pitch pine.
<i>Pinus taeda</i> ,	Loblolly pine.
<i>Populus angulata</i> ,	Cotton wood.
<i>Platanus occidentalis</i> ,	Sycamore.
<i>Phytolacca decandra</i> ,	Poke.
<i>Quercus alba</i> ,	White oak.
<i>Quercus aquatica</i> ,	Water oak.
<i>Quercus falcata</i> ,	Spanish oak.
<i>Quercus ferruginea</i> ,	Black jack oak.
<i>Quercus lyrata</i> ,	Swamp white oak.
<i>Quercus macrocarpa</i> ,	Overcup oak.
<i>Quercus obtusiloba</i> ,	Post oak.
<i>Quercus phellos</i> ,	Willow oak.
<i>Quercus rubra</i> ,	Red oak.
<i>Quercus tinctoria</i> ,	Black oak.
<i>Quercus virens</i> ,	Live oak.†
<i>Rigolet</i> ,	A water that flows both ways.
<i>Robinia pseud-acaciu</i> ,	Black locust.
<i>Robinia pumila</i> ,	Dwarf locust.

* In the Mississippi territory and Louisiana, the Buckeye is a dwarf shrub; but no perceptible difference appears in the flower or fruit, from those found in other parts of the United States.

† The live oak is limited to the following range in Louisiana—beginning on the Mermentau lake; thence up the lake and river to the mouth of the Bayou Queue Tortue; thence along that bayou to its source; thence with the line of demarkation of Opelousas and Attacapas, to the mouth of Courtableau; thence in nearly a direct line to the junction of Amite and Comite; and thence east to Pudido Bay. It is singular that this tree is found in all parts of Attacapas, and cannot be considered amongst the forest trees of Opelousas, or the Sabine and Calcasu, it is very rare; and becomes abundant on the lower Mermentau.

VOCABULARY.

<i>Robinia bistineau,</i>	Bistineau locust.
<i>Rubus villosus</i> (or <i>fruticosus,</i>)	Blackberry.
<i>Sambucus rubra,</i>	Red-berried elder.
<i>Tilia pubescens,</i>	Downy Linden.
<i>Ulmus americana,</i>	Mucilaginous elm.
<i>Ulmus rubra,</i>	Red elm.
<i>Ulmus aquatica,</i>	Swamp elm.
<i>Ulmus alata,</i> (winged)	Large leaved elm.

Vacherie,—A farm where cattle are kept.

<i>Vaccinium stamineum,</i>	Large whortleberry.
<i>Vaccinium arboreum,</i>	Tree whortleberry.
<i>Vaccinium macrocarpon,</i>	Cranberry.
<i>Vitis verrucosa,</i>	Muscadine.
<i>Vitis laciniosa</i> ,—Parsley leaved water grape	vine.
<i>Vitis riparia,</i>	River grape vine.

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After this volume was put into the binder's hands, the following opinion of M. de Prony, on the subject of the overflow of the Po, met the author's observation. The scheme proposed by M. de Prony being so perfectly the same as that offered in this work respecting the Crevasses of the Mississippi, the author could not deny himself the aid of so respectable a name ; nor withhold from his readers the benefits of foreign experience on so important a subject.

“M. DE PRONY, a learned member of the Institute, and inspector-general of bridges and highways, has communicated to me some very valuable observations, to explain the changes which have taken place on the flat shores usually denominated the *Littoral* of the Adriatic, and which will be found appended to this Essay. Having been directed by government to examine and report upon the precautions which might be employed for preventing the devastations occasioned by the floods of the Po, he ascertained that this river has so greatly raised the level of its bottom, since it was shut in by dikes, that its present surface is higher than the roofs of the houses in Ferrara. At the same time, the alluvial additions produced by this river have advanced so rapidly into the sea, that, by comparing old charts with the present state, the coast appears to have gained no less than fourteen thousand yards since the year 1604, giving an average of an hundred and eighty to two hundred feet yearly ; and in some places the average amounts to two hundred feet. The Adige and the Po are both at present higher than the intervening lands ; and the only remedy for preventing the disasters which are now threatened by their annual overflowings, would be to open up new channels for the more ready discharge of their waters, through the low grounds which have been formed by their alluvial depositions.”

Essay on the Theory of the Earth. CUVIER.—*Edinburgh Edition*, 1813,
page 138.



NOTE TO PAGE 128.

SINCE this work was put to press, alarming accounts have been published respecting a Crevasse, in the Levée, on the left bank of the Mississippi, in the same bend in which the city of New Orleans is situated. This recent Crevasse differs in nothing from those that occur almost annually, and that must occur again, until a change of system is adopted respecting the Mississippi banks.

Crevassees are occasioned by two causes; first, the yielding of the Levée, and secondly, the sinking of the bank of the river. The former kind could, in most instances, be prevented, by prudently retiring the Levée from the immediate margin of the river; the latter is more frequent, and is almost uniformly produced by neglect.

The preventative, by forming artificial outlets sufficiently wide to admit the water to flow over the natural bank into the adjacent lakes, is the only means that will ever remove the danger of Crevassees. The natural outlets of the Mississippi, have all banks higher than the neighbouring country; will not consequently receive, by any human labour, much more water than now enters at high flood. We have recommended the lowest part of the margin of the Mississippi as the most suitable places to form those sluices. A deep canal ought to be cut that would carry a current from the river at all seasons; and above and below its efflux, a strong Levée, formed from the river to whatever lake was made the deposit. The distance between those Levées ought to exceed the width of the Mississippi considerably.

We are far from expecting that this improvement will soon be carried into effect, though its beneficial consequences are too obvious to demand demonstration. Two causes oppose themselves to all human improvements—the difficulty of convincing the public of their utility and practicability, and the greater difficulty of withdrawing men from their habitual course.

There are some local peculiarities in the bend in which New Orleans stands, that render the consequences of a Crevasse at that place more than usually injurious. Near Mr. Sauvés plantation rises bayou Metarie, which runs into Bayou St. Johns, in the suburb of that name. In a line with bayou Metarie, but on the contrary side of bayou St. John, rises bayou Sauvage, which continues its course into the pass of Chef Menteur. Both the Metarie and Sauvage have high banks in continuity, except the interval made by bayou St. Johns.

Bayou Bienvenu rises behind the suburb Marigny, and runs into lake Borgne. Through the latter bayou, the waters of the late Crevasse found the widest vent, and flowed where did most part of the water that escaped from the Mississippi, in the New Orleans bend, before the Levées were formed.

THE AUTHOR,

ERRATA.

- In line 3, of preface, p. vi. for present read *presents*.
24, p. 12, after rivers, add, *and by the Pearl river to its mouth*.
10, of note, p. 89, for barbaurous, read *barbarous*.
22, note, for Berthelcmy, read *Barthelemy*.
6, p. 57, for pelucid, read *pellucid*.
2, p. 59, for cross, read *crosses*.
4, p. 59, for rush, read *rushes*.
- In last line, p. 61, for Cupreses, read *Cupressus*.
- In line 10, p. 62, for mark, read *marks*.
11, p. 62, for seperate, read *separates*.
4, from the bottom, for marrais, read *marais*.
14, p. 63, for wind, read *winds*.
5, p. 66, for aligator, read *alligator*.
3, from the bottom, p. 70, for Fause, read *Fausse*.
6, from the bottom, p. 74, for relucant, read *refluent*.
19, p. 82, for percipitous, read *precipitous*.
16, p. 92, for dear, read *deer*.
7, from the bottom, p. 94, for Ptolomy, read *Ptolemy*.
8, p. 99, for eastuary, read *estuary*.
3, from the bottom, p. 106, for Catalpha, read *Catalpa*.
10, 15, 19, p. 120, for Fause, read *Fausse*.
12, p. 126, for semi-elipsis, read *semi-ellipsis*.
17, p. 126, for eliptical, read *elliptical*.
21, p. 126, for elipsis, read *ellipsis*.
26, p. 126, for eliptical, read *elliptical*.
18, p. 127, for superfices, read *superficies*.
14, p. 128, for crevases, read *crevasses*.
19, p. 132, for too, read *two*.
3, p. 133, for left bank, read *right bank*; and for right shore,
read *left shore*.
8, p. 136, for Fause, read *Fausse*.
- In last line, p. 138, for twenty, read *two hundred*.
- In note, line 21, p. 140, for magafins, read *magazines*.
- In line 4, p. 155, for hasten, read *hastens*.
5, p. 155, for secure, read *secures*.
15, p. 155, for Maurapas, read *Maurepas*.
18, p. 155, for Fause, read *Fausse*.
20, p. 176, for skirt, read *skirts*.
p. 180, statistical table, for Ocatchoola, read *Ocatahoolu*.
14, p. 187, for part, read *parts*; and for is, read *are*.
16, p. 190, for is, read *are*.
4, p. 195, from the bottom, after Mississippi, add, *below the
Iberville*.





Map of part of
LOUISIANA
copied from Homans Map
Published at Turinberg in 1712

MEXICANUS
S^o S^o S^o

NOVUM REGNI LEONIS

W. D. Dwyer del.

APPENDIX.

PROGRESSIVE GEOGRAPHY OF LOUISIANA.

FERDINAND DE SOTO, in 1539-40, was no doubt the first European who actually traversed the regions near the mouth of the Mississippi; whose adventures have been preserved in literature.—So extravagant, however, were the then projects of Spanish travellers in pursuit of the precious metals, and so little qualified to collect useful knowledge, that very few precise ideas of the countries through which they roamed, can be collected from their accounts. We may therefore conclude of the voyage of Soto, like many others, that he traversed, but did not discover the countries over which he travelled.

After the voyage of Soto, 132 years elapsed before any farther knowledge of Louisiana was obtained by any European nation. In 1674, two French traders, Joliet and Marquette reached the Mississippi by penetrating from Canada through lakes Huron and Michigan—and through the Fox and Ouisconsin rivers. Shortly after the return of Joliet and Marquette, M. de la Salle, a gentleman from Rouen, in Normandy, in company with Father Lewis Hennepin, reached the Mississippi by the Illinois, and built fort Crevecoeur

—M. la Salle explored the river to the mouth—Hennepin surveyed it upwards above St. Anthony's Falls—went soon after to France, published an account of his discoveries, and named the country *Louisiana*.

La Salle returned to France, and in 1684, obtained from the ministry a small squadron, with which he set out, carrying orders to establish a colony on the Mississippi. From the very defective knowledge then gained of the northern part of the Mexican gulph, La Salle passed the mouth of the Mississippi; and, entering a deep and wide bay, he landed his men and effects, thinking himself on the Mississippi; but soon found his fatal error. An establishment was made, and a fort built. The country was taken possession of in the name of the king of France, with the formalities usual on such occasions, practised by European nations in their American conquests.

With the subsequent fate of La Salle's colony and his own death, we have nothing to do; these events are not pertinent to the question of previous possession.

In the month of February, 1699, the French under M. de Bienville, landed on the shore of the Biloxi Bay, opposite the pass between Ship and Cat islands, and formed the first permanent establishment in Louisiana. It may be remarked with justice to the memory of Bienville, that he was, if not the greatest of all the commanders sent from Europe since the discovery of America to establish colonies on that conti-

ment; he certainly was one of the number best calculated to encounter and overcome the numerous difficulties attending an establishment in a newly discovered region.

Bienville found Pensacola in possession of the Spaniards.

On the 13th of December, 1701, an order arrived from Europe to the French commandant, directing the removal of the colony from Biloxi to Dauphin island, at the mouth of Mobile river. This order was executed on the 16th January, 1702. Nearly contemporary establishments were made on Dauphin island and on Mobile bay, where the town of Mobile and fort Condé now stand.

Perdido river being the only entrance from the gulph of Mexico between Mobile and Pensacola bays, and at very nearly mid-distance, became at that early period the point of separation between the Spanish colony of Florida, and the French colony of Louisiana.

I have sought in vain for French or Spanish maps of Florida and Louisiana published in the beginning of the 18th century, though I have been informed there are such; but have been more fortunate with those of England and Germany. I have procured two maps, one published in London, 1719, dedicated to William Law, Esq. of Laureston; having Louisiana as the centre, but reaching westward from Ches-

peake bay 33 degrees of longitude, and having the Rio Grande del Norte included in its western limit.

The other map was published before the above period, or about (1712) and bears the title of—

Regni Mexicani, Novæ Hispaniæ, Ludovicianæ, N. Angliæ, Caroliniæ, Virginæ, et Pennsylvania, sed non Insularum Archipelagi Mexicani, in America, Septentrionali, accurata tabula, exhibita a Joh. Baptista Homano, Noribergæ.*

* The editor of the *Aurora* has two maps by Homann of Nuremberg, one of which is entitled *Amplissimæ Regiones Mississippii, seu Provinciæ, Ludovicianæ, a R. P. Hennepin, Fran. Miss. anno 1687; edita p. J. B. Homann, Geograph Noribergæ*. This map agrees with that above cited; it is colored, and the routes of La Salle are very perspicuously traced, as well as of M. Cavalier, in 1687.

The routes of Soto in 1543, and his successor in 1552, are given in a very curious and distinct manner.

The British official map published in 1755, in two parts, by Bowen, intended to point out boundaries, fixes the south-west limit of Louisiana at the same place as Homann.

In a geographical work published in London, in 1717, with the title of "*Atlas Geographicus; or a complete System of Geography ancient and modern.*" Page 670, vol. v. is a map of Louisiana, upon which the outline of that colony is marked as in the above cited maps of Homann and others. The latter work is No. 470 in the Philadelphia Library.

No. 1040 in the Philadelphia Library, is a copy of Joutel's relation of La Salle's last voyage, printed in Paris, 1713. This book is a very valuable document in relation to Louisiana.

The map attending this Appendix is an exact copy of part of Homann's Latin map, which appears to be the original from which the others have been drawn. I have not even translated the names, considering it would be more satisfactory to the public to preserve the literal form as near as possible.

On both these maps the coasts, rivers, mountains, and other grand features of nature, in those parts of North America are embraced, and drawn with astonishing correctness for the period of their publication. In the regions west of the Mississippi, but little additional accurate knowledge and no precision has been gained up to this time; no map extant has met my observation, in which the now Missouri territory and the province of Texas are more accurately defined.

In the London map, the bounds of Louisiana commences west at the mouth of Rio Grande del Norte, ascends that river to the mouth of the Rio Salado de Apaches (now St. Paul's) thence along that river to its source; thence by a curve to the 37° N. lat. where the limit meets the margin of the map.

On the east side, Carolina, Georgia, and part of Virginia, Maryland and Pennsylvania, are included. On the north, the boundary is left undefined.

The Nuremberg map commences Louisiana at the mouth of the Rio Grande del Norte, ascends that river to the mouth of St. Paul's river; thence by a line nearly north, until it reaches 38° north latitude; thence east through the now territories of Missouri and Illinois, and the states of Indiana, Ohio, Kentucky and Virginia, to the sources of James river, thence nearly similar to the London map, until the limit merges into the Atlantic Ocean.

These two maps shew that the bounds of Louisiana

were at the epoch of their publication considered by the literati of Europe, as reaching to the Rio Grande del Norte. In both, the fort built by M. de la Salle, is laid down at the head of the bay of Espiritu Santo, and on the west side of the mouth of the Guadaloupe or St. Marks, on the spot now called Matagorda.

With the general contour of the coast of the Mexican Gulph, these maps have great resemblance, though differing considerably in latitude and longitude of places. Constant opposition from the Spanish authorities in America were experienced by the French officers in Louisiana. The respective boundaries were made the subject of continual altercation. To decide the extent to which it had a right to claim territory in Louisiana, the French government in 1718, sent M. de la Harpe to Louisiana, to explore the country by sea and land, and establish as far as possible the true limits of the province.

1683.—M. de la Salle and the chevalier Tonty, discovered the country now called Louisiana; and the course of the Mississippi from the Illinois to its mouth in the Gulph of Mexico; took possession of the country in the name of Louis XIV. Saint Louis on the right bank of the Mississippi, now the seat of government of the Missouri territory, founded, and Fort Crevecoeur built.

1683.—De la Salle returned to Canada, and from thence to France; gained by the interest of the prince

of Conti and the marquis de Seignelai, (son of the great Colbert) a small squadron, with which

1685, February 16th.—He landed at the mouth of the Guadaloupe river, on the bay of Espiritu Santo, and built a fort.

1687, March 19th.—La Salle was murdered by two of his own men, on, it is supposed, the now Colorado river. Thus perished one of the most active, enterprising, and illustrious discoverers, that ever traversed the wilds of the new world. It is to be hoped, that the government of the United States, will never suffer any momentary policy to induce it to abandon the claim, to the soil rendered sacred by the manes of De la Salle.

1699, January 26.—M. d'Iberville and M. de Bienville arrived before Pensacola, and found the bay and shore occupied by a Spanish force under Don André de la Riola.

—, 31.—Anchors before Dauphine Island. In the course of the first four months of this year, the coast from Mobile to the mouth of the Mississippi; that river to the efflux of Manchac, the lakes Maurepas and Pontchartrain, were successively visited by the French.

1699, April 12th.—Fort on Biloxi bay founded May 1st, M. d'Iberville sailed for France, leaving M. de Bienville to command the colony; returns to Louisiana the same year.

1700, May—Bienville, by order of Iberville, ascended Red river to Natchitoches, found the Natchitoches and Yatassée nations of Indians in possession of the country, but could find no Spanish establishment in that quarter.—*La Harpe*.

May 28—M. d'Iberville sails for Europe, leaving the command to Bienville. Garrison built on the Mississippi, near where fort St. Philip at the Plaquemine bend, now stands.

St. Denis sent to explore the country on Red river; remained six months in the Yatassée village without hearing of any Spanish establishment in the neighbourhood.—*La Harpe*.

The Yatassée village was situated about forty miles N. W. of the now town of Natchitoches, in the settlement of bayou Pierre.

1712.—The king of France, by letters patent, ceded the civil jurisdiction of Louisiana to Crozat.

1716.—Bienville appointed by the regency of France commandant of the Mississippi. Hitherto this truly estimable man had acted in a subordinate station; but though his brother d'Iberville was nominally the founder of the colony, the active operations were performed by Bienville. Vigilant, humane, and just, he conciliated the savages by his urbanity, and repressed their violence by his courage. Steady indeed must have been the mind, and enlight-

ened the understanding, that carried the infant colony of Louisiana through the war of the succession, whilst struggling against internal disorder, arising from the conflicting authority of royal power and individual charter.

1716, *July 25th*—St. Denis returned and reported to Bienville—

“That on the 15th September, 1714, he had arrived at the village of Assinaye, S. W. of Natchitoches, without being able to find any Spanish establishment. From Assinaye, St. Denis traversed the region west of Red river, and first found, at two leagues west of Rio Bravo, or Rio del Norte, the mission of St. John Baptiste, commanded by captain Raymond.”—*La Harpe*.

1717—Louisiana ceded to the West Company.

January—Natchitoches taken possession of by M. de la Motte.

January 29th—The mission of St. Michel, at the Adayes, nine miles west of Natchitoches, founded by order of Linares, then viceroy of Mexico; by father Augustine, a religieux of the order of Recollets.

New Orleans founded, and named from the regent duke of Orleans.

1718, February—Bienville, by royal commission, appointed governor general. Chateaugué sent by Bienville to take possession of the bay of St. Joseph, which was soon abandoned by the French, from want of provisions, and soon after occupied by the Spaniards.

October—De la Harpe enters on the execution of his commission.

1718, April 30th—M. de la Harpe arrived at Dauphin Island—October 8th, at New Orleans—December 10th, sets out upon a voyage up Red river—arrives at Natchitoches

1719, January—where he found M. Blondel, commandant, from whom he learned that Don Martin Delacorne, then Spanish commandant of the province of Texas, was at the Adayes, nine miles from the station at Natchitoches; that Delacorne had recently returned from the Rio del Norte, where he had established several missions, and a post upon a bay near the mouth of the Guadaloupe and St. Marc, to which he gave the name of the Bay of Espiritu Santo; and that the Spanish commandant was then hastening his preparations to form an establishment at the Cado village, on Red river.

M. de la Harpe, in order to gain the first occupancy of Red river, set out from Natchitoches

1719, February 6th—And on the 21st April, arrived at the united villages of the Cados, Natsoos, Nassonites, and Yattasees, 150 leagues, by the windings of the river, above Natchitoches.

1719, April 27th—M. de la Harpe laid the foundation of a fort in the Natsoo village. This post was maintained until the cession of Louisiana to Spain by France.

1719, June—M. de la Harpe received the following letter from Don Martin Delacorne :

“MONSIEUR—I am very sensible of the politeness that M. de Bienville and yourself have had the goodness to show to me. The orders I have received from the king, my master, is, to maintain a good understanding with the French of Louisiana; my own inclinations lead me equally to afford them all the services that depend upon me. But I am compelled to say, that your arrival at the Nassonite village surprises me very much. Your governor could not be ignorant that the post you occupy belongs to my government, and that all the lands west of the Nassonites depend upon New Mexico. I counsel you to give advice of this to M. Bienville, or you will force me to oblige you to abandon lands that the French have no right to occupy.

“I have the honor to be, Sir,

“DELACORNE.

“*Trinity River, May 20th, 1719.*”

To this letter, the following reply was sent :

“MONSIEUR—The order from his catholic majesty to maintain a good understanding with the French of Louisiana, and the kind intentions you have your-

self expressed towards them, accord but little with your proceedings. Permit me to inform you, that M. de Bienville is perfectly informed of the limits of his government, and is very certain that the post of Nassonite depends not upon the dominions of his catholic majesty. He knows also that the province of Lastekas, of which you say you are governor, is a part of Louisiana. M. de le Salle took possession in 1685, in the name of his most christian majesty; and since the above epoch, possession has been renewed from time to time.

“Respecting the post of Nassonite, I cannot comprehend by what right you pretend that it forms a part of New Mexico. I beg leave to represent to you, that Don Antoine du Miroir, who discovered New Mexico in 1683, never penetrated east of that province or the Rio Bravo. It was the French who first made alliances with the savage tribes in this region; and it is natural to conclude, that a river that flows into the Mississippi, and the lands it waters, belongs to the king my master.

“If you will do me the pleasure to come into this quarter, I will convince you I hold a post I know how to defend.

“I have the honour to be, Sir,

DE LA HARPE.

Nassonite, July 8th, 1719.”

In the course of 1720, M. de la Harpe visited the waters of the Ouachitta, Arkansaw, and Red river,

considerably to the west and north of Nassonite, and in January, 1720, returned to New Orleans.

In the month of August, 1721, M. de la Harpe received the following

ORDER.

We, John Baptiste de Bienville, chevalier of the military order of St. Louis, and commandant general for the king, in the province of Louisiana.

It is hereby decreed, that M. de la Harpe, commandant of the Bay of St. Bernard, shall embark in the packet the Subtile, commanded by Beranger, with a detachment of 20 soldiers under M. de Belile, and shall proceed forthwith to the Bay of St. Bernard, belonging to this province, and take possession in the name of the king, and the West Company shall plant the arms of the king in the ground, and build a fort upon whatever spot appears most advantageous for the defence of the place.

If the Spaniards or any other nation has taken possession, M. de la Harpe will signify to them that they have no right to the country, it being known that possession was taken in 1685 by M. de la Salle, in the name of the king of France, &c.

BIENVILLE.

August 10th, 1721.

In October following, M. de la Harpe returned to New Orleans, and reported that in pursuance of his

orders, he had coasted 100 leagues west of the Mississippi, and on August 27th had entered a fine bay, with 11 feet water at half tide; that his weak force, and the hostility of the savages prevented him from forming any permanent establishment. That the bay known to the French as St. Bernard, was the same designated by the Spaniards as del Espiritu Santo.

From the vague manner with which his latitude and longitude are laid down we are under some difficulty in locating the bay into which M. de la Harpe entered; but from his verbal description of the rivers that entered its inland extremity, it must be the bay now called "Galvezton bay," into which the Trinity disembogues its waters, lying in lat. $29^{\circ} 30'$. and 95° west long. from Greenwich, and 18° west from Washington city.

M. de la Harpe concludes his report in these words:

The extent of Louisiana from west to east, is from the bay discovered in August 1721, by M. de la Harpe, lat $29^{\circ} 12'$, long 282 east from Ferro, (95 west from Greenwich,) to the Perdido, between Mobile and Pensacola, having above one hundred and sixty marine leagues of coast.

Thus remains the question of the limits of this great country until this moment. From the facts stated, it will appear demonstrative that to a distance far west of any place the United States have yet occupied, that the claims of France, by prior possession, was deci-

sively established.—How far policy will influence the government of the United States, in establishing the extent of the right it has acquired from France, remains unexplained ; but we may be justifiable in asserting, that whoever possesses the two fine bays of Espiritu Santo and St. Bernard, has completely the commerce of the Spanish internal provinces in their hands.

The rivers that enter the gulph of Mexico, west of the Mississippi, are the Fourche, Atchafalaya, Vermillion, Mermentau, Calcasu, and Sabine, in the state of Louisiana ; the Trinity, Brasos à Dios, Colorado, and the united streams of the Gaudaloupe and the St. Marco, in the province of Texas. These streams head on the inclined plane between Red river, Rio del Norte, and the Guiph of Mexico. Many of them are considerable for their length and columns of water, and all are important as means of uniting distant and valuable portions of this continent.

The point of separation between the Spanish dominions, and Louisiana upon the Pacific ocean, though not so easily determined as upon the Gulph of Mexico, yet there exists sufficient data to enable the geographer to mark, with considerable precision, the point that principles of equity would determine as the dividing limit between the two nations.

The Spaniards have long since formed a permanent establishment, on the south side of the bay of St. Francisco, N. lat. $37^{\circ} 42'$ west long. 132° from London. Thus far, Spain has decided, undisputed, and

real possession on the north-west coast of North America.

The title of the United States to the countries upon the middle waters of Columbia river, cannot be contested, by either Spain or Great Britain, consistent with the principles upon which all European claims have been, in the first instance, established in America.

The distance from the mouth of the Columbia river, to St. Francisco, is about six hundred miles. If we may be permitted to infer, that the title of the United States to the country near the mouth of the Columbia river, and that of Spain to St. Francisco, cannot in justice be contested; then some intermediate point must become the determinate limit. If the respective claims are equal to the two extremes assumed, and if the two nations have similar rights to the intervening region, it follows, that mid-distance would certainly be the most suitable boundary upon rules of public law, and principles of sound policy.

Upon this maxim, drawn from common sense, and long assented to, do the United States, now correctly claim the Perdido, as the east boundary of Louisiana.

When we reflect upon the rapid approach towards each other, of the two masses of civilized men, that inhabit this continent, we cannot call this essay upon their line of demarkation an idle speculation. The day is advancing with rapidity, when this great frontier will cease to be inhabited by savages; when either

the deductions of reason, or the point of the bayonet, must trace the line that divides two great empires.

I have presented to the American reader the evidence—it results, that all the distance between the mouths of the Rio Grande del Norte, and the Perdido rivers, and far inland, was first discovered and settled by France. That the scattering Spanish presidios in Texas, were made after 1714, and consequently could not impair the claim, that France had to countries she had explored and colonized, long before the Spanish settlements were formed.

Upon rules of policy, the United States ought to enforce its title to Louisiana, in the most extensive scale upon which justice will sanction the claim. The province of Texas is now a wilderness, with but partial exceptions. In the first half of the current century, this region will be inhabited by either emigrants from the United States, or the Spanish colonies. The interior towards Red river is barren, but the parts adjacent to the Gulph of Mexico, have characteristics in common with Attacapas and Opelousas, and will yield the same staples.

With the Rio Grande del Norte, ought the southwestern emigration of the people of the United States, to find an eternal *ne plus ultra*.

WILLIAM DARBY.

ATTESTATIONS.

The undersigned has examined a Map of the state of Louisiana, by William Darby, of the county of Opelousas, which has long engaged the attention of that gentleman, and is believed for the most part, to be the result of his personal observation.

The undersigned cannot vouch for the entire accuracy of this Map, but as far as his local knowledge enables him to judge, the work appears to be faithfully executed, and to present an accurate view of Louisiana,

Given at New Orleans, on the 29th of June, 1816.

WILLIAM C. C. CLAIBORNE.

Head Quarters, New Orleans, 5th April, 1815.

I have no doubt, whatever, that Mr. Darby's Map of Louisiana is more correct than any which has been published of that country.

He has certainly taken extraordinary pains to acquire correct information; and so far as my opportunities have enabled me to judge, I am induced to think his delineations very exact.

ANDREW JACKSON,

Maj. Gen. com'g. 7th Mil. Dis.

Mr. William Darby having mentioned to me his intention to publish a General Map of the state of Loui-

ATTESTATIONS.

siana, I have no doubt, from the industry and capacity of Mr. Darby, his Map is correct: It is drawn principally from actual survey and the most minute observation. Mr. Darby having been a surveyor in this country, and very extensively engaged as such, and possessing a genius most peculiarly adapted, and directed to geographical studies. I am of opinion his Map will be very full and minute. Having some acquaintance with the topography of Louisiana, on examining his Map I find it very accurate, as far as my observation has extended.

No trouble, expense, or labour have been spared by Mr. Darby in compiling his Map, and the scale upon which it is proposed to be published, will make it the most full, perfect, and complete Map of Louisiana, which has ever been published.

The historical notes proposed to be appended by Mr. Darby, from the extent of his general information and capacity, I have little doubt will be no small acquisition as well to the literature as the history of the United States.

WILLIAM O. WINSTON.

New Orleans, April 1, 1815.

I have examined Mr. Darby's Map of Louisiana, and am of opinion that the delineations are faithfully drawn, and that it exhibits much more correct information of the topography of this country, than any Map heretofore published, and I heartily concur in the opinions expressed by maj. W. O. Winston, as above.

Given at New Orleans, April 2d, 1815.

EDMUND P. GAINES,

Maj. Gen. by Brevet.

ATTESTATIONS.

I have no hesitation to say, that from my knowledge of the country, and by the comparison with our original surveys made at great expense and now in my possession, that the Map of Louisiana, published by Mr. William Darby, is by far the most correct which is extant—particularly in the important communications of the Iberville on the east, and the Fourche and Atchafalaya outlets on the west, with the Mississippi; and also the mouths of that river, and its general course and various inflexions.

JAMES WILKINSON.

Philadelphia, April 19th, 1816.

“Mr. William Darby, to whom I am indebted for the Statistical View and Table, has been engaged for a number of years in preparing an elaborate work on Louisiana. Possessing strong original genius, with considerable acquirements, and indefatigable industry, the public may expect something substantially useful in his labors. He has almost completed, from actual survey, a map of the new state of Louisiana; a work of vast difficulty and labor, from the strange configuration of the country, being cut up, and infinitely diversified, by bayous, swamps, lakes, lagoons, and a thousand other objects calculated to impose difficulties on the undertaking.”

(View of Louisiana, by H. M. Brackenridge, esq—pref. p. 5.)

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[Illegible text block 3]

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